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ABSTRACT

Guidelines for cooperative education in two-year technical colleges as well as for other associate degree programs are presented in this 15 chapter manual. Chapter 1 covers cooperative education history, current status, advantages and disadvantages, purposes, and information sources. Chapter 2 on personnel presents an overview and discusses the director, coordinator, secretary, and program positions within the school structure. The necessity of committees is treated in Chapter 3 along with the planning committee and its subdivisions (curriculum, fiscal, calendar, and student affairs), visiting other institutions, and the advisory committee and proposed constitution. The chronology of setting up cooperative programs is the subject of Chapter 4. Chapters 5 and 6 deal with costs and budgeting, and funding sources. Chapter 7 treats public relations and selling cooperative education. Chapters 8-10 review scheduling and course selection, job development, and record keeping. Veterans, social security, the Comprehensive Employment Training Act, and unemployment are treated in Chapter 11. Consultation and evaluation are reviewed in Chapter 12. Chapter 13 deals with United States government participation, Chapter 14 with student affairs, and Chapter 15 with United States and Canadian cooperative education surveys. A bibliography is included. (TR)

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COOPERATIVE EDUCATION GUIDELINES FOR TECHNICAL COLLEGES

AND OTHER ASSOCIATE DEGREE PROGRAMS

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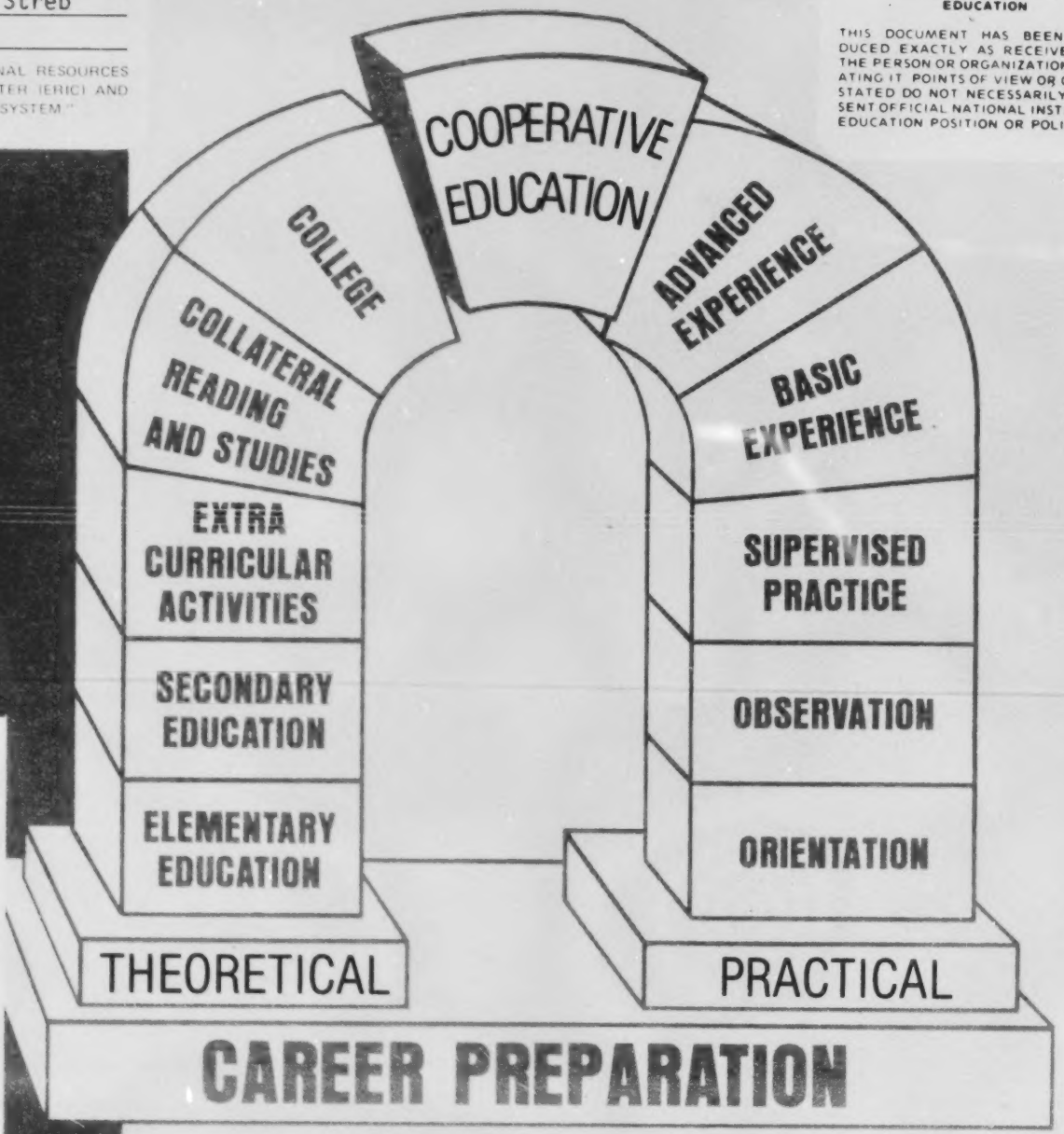

STARK TECHNICAL COLLEGE
CANTON, OHIO

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INTRODUCTION

The Ohio Organization of Technical Colleges endorses the following meaning and statement of purpose of technical education:

> Technical education is a post-secondary, college-level program of instruction intended to prepare persons **uncompromisingly** for employment as technicians or para-professionals within a technical specialty area and in support of professional, administration or managerial personnel. Technical education provides a background sufficient not only for entry employment but also sufficient for growth and advancement within the selected field.

Technical colleges have designed and planned their technical education to meet the following student-centered objectives.

1. A team of technical educators and community employers work together, first, to identify the skills and knowledge required by each technology and, next, to develop programs specific enough to meet immediate needs, yet broad enough to provide a base for the skills and knowledge required for future technical occupations in the community.
2. To prepare students for constructive citizenship. Every technician must function effectively as a member of the community, state, and national groups and must intelligently use the basic principles and skills of citizenship.
3. To develop in the students social competencies which make employment possible, permanent, and profitable.

There is probably no single educational plan more in harmony with these objectives than cooperative education. In aiding the college to help the students to achieve their goals in the various technologies, co-op inevitably brings the faculty and employers closer together to identify and define those goals more clearly. The academic world and the world of business-industry-government are kept more currently aware of each other's latest developments.

Since 1906 cooperative education has existed in four-year colleges and universities, but until now very little information has existed pertaining to its planning and implementation in two-year technical colleges. The purpose of this report is to remedy that deficiency.

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INTERACTION
OF
COOPERATIVE EDUCATION

"Give me a fish and I will eat for today.
Teach me to fish and I will eat for the rest of my life." ANCIENT PROVERB

NARRATIVE

Cooperative Education on the college level may be defined as a program which combines outside practical experience with in-class academic work. The job experience should be related to the student's academic major and should parallel the academic work as closely as possible, even to the extent of increasing gradually in scope and difficulty. In addition, co-op should contain means for evaluating student job performance and experience as well as work station desirability.

Although it will become obvious to the readers that the above is a minimal explanation, the rest of the information in this book will enable each institution to develop its own unique program within the framework of this somewhat skeletal definition.

Why have Cooperative Education? All living things change, and few things are more alive than the field of education. One expression of this vitality is in the perpetually shifting emphasis on theory vs. application. In the 18th century when Thomas Jefferson and the rest of our stalwart forebears were in school, curricula and educational philosophies were greatly different from those of today. For instance, it was generally accepted that no one was well and completely educated unless he were fluent in classical Greek!

As late as the 19th century a very significant number of the best doctors in this country never saw the inside of a medical school! They learned their profession by watching and working with practicing physicians. Although some became remarkably skillful, their knowledge and capabilities were severely limited by a lack of basic theory.

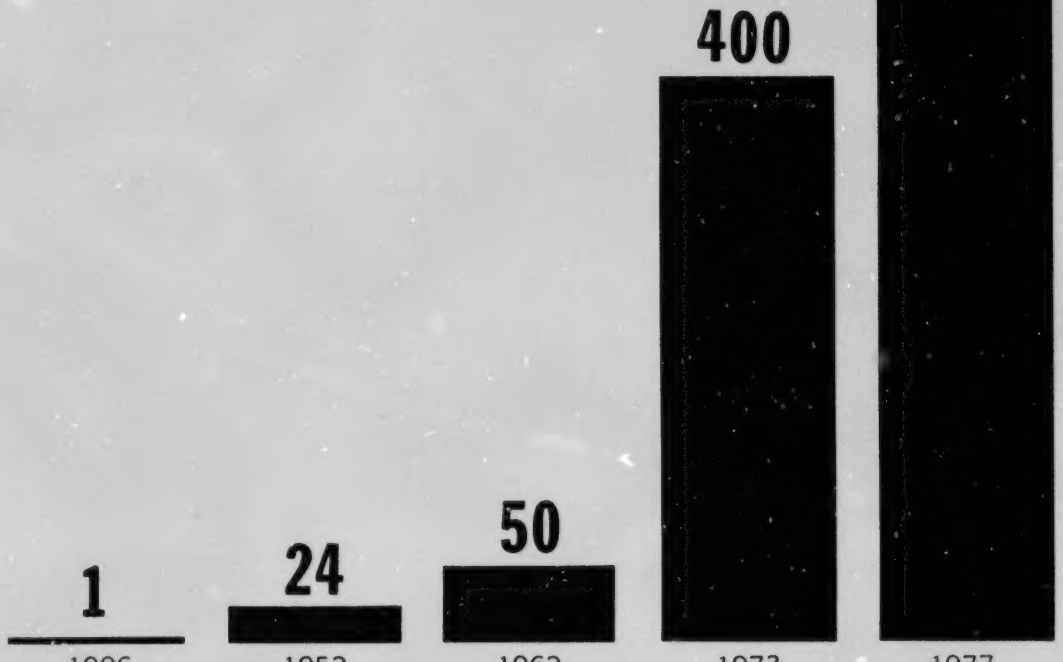
Today, it might be argued that educational emphasis has sometimes shifted too heavily toward theory. The philosophy has often been to teach plenty of theory in school, because the student has the remainder of a lifetime to learn the practical aspects.

Now we are seeing that an even better system is to combine the theoretical and the practical through Cooperative Education — a sort of "constructive step both backward and forward." Co-op was started in 1906 at the University of Cincinnati by the Dean of the College of Engineering. Cincinnati was then already highly industrialized, and the cooperative education program offered to business and industry some very teachable students with desirable knowledge and skills. Recognizing the many advantages of being able to hire proven, experienced, pre-screened college people immediately upon graduation, employers began co-oping students and the program was viable.

Until recently, cooperative education grew slowly. In 1952, twenty-four colleges were using it. By 1962 the number had more than doubled to 50. Then came the rapid growth to 400 by 1973 and around 1100 by 1977 (see graph). The number of students involved is approximately 250,000 while the number of participating companies is nearly 30,000.

Undoubtedly, Federal grants to participating schools have been partially responsible for the dramatic recent growth. Satisfaction, however, has to be the reason the employers participate in this completely voluntary program year after year. Employers range in size from one-man operations to the very largest like Ford, General Motors, General Electric, Lockheed Aircraft, Union Carbide, and the Government. Gross annual earnings of co-op students are now estimated at $760,000,000, on which they pay income taxes of almost $40,000,000 (four times the annual federal funding). Of the top 50 companies in **Fortune Magazine's** "Fortune 500", 80% employ co-ops. The top ten all use them. An official of the Ford Company summed up Ford's reasons for constant participation: "It's practical. It works. It's good business!"

The number of institutions offering Cooperative Education programs in the U.S. has risen from 1 in 1906 to 24 in 1952 to 1100 in 1977.



Approximately 55% of the students who co-op with a company join that company after graduation. Since the company and the student have become acquainted before establishing a binding commitment, pre-screening has already occurred. As a result, companies report a retention rate of about 83% of co-op graduates compared with 55% of non-co-op graduates over a similar period, a significant saving of employment costs. In addition, it is typical for companies (e.g., Lockheed Aircraft) to state that pre-employment experience puts the co-op graduate about a year ahead of a non-co-op graduate after three years on the job. While this statement was made concerning co-op students of four-year institutions, it is reasonable to expect similar results of co-ops from two-year colleges. Cooperative education is, indeed, good business!

ADVANTAGES OF CO-OP

1. Co-op is a valuable recruiting tool, since the college can provide its students some solution to the "experience required" stipulation attached to so many job openings.
2. Co-op helps to keep curricula current and relevant by bringing back to the campus information on the latest practices in business and industry.
3. Co-op makes the relationship between the college and the commuity more meaningful and fruitful.
4. Co-op permits the college to accommodate more students without expanding its physical facilities. The alternating plan can also help the college to get more summer use from its physical facilities.
5. Co-op can be applied to a great variety of academic disciplines.

PURPOSES OF CO-OP

Of course, different two-year colleges will have different philosophies about the purpose of cooperative education. Here are seven possible viewpoints:

a) career orientation
b) career exploration
c) social development
d) career preparation
e) a job and earning while learning
f) ease of transition from school to work
g) serving business and industrial communities

Career Orientation

A student may like and be capable with electricity, but the field is so vast that the student must narrow his/her efforts to a sub-field like communications, power, electronics, etc. Co-op can assist in orienting the career choice properly.

Career Exploration

Perhaps a student feels strongly about career choice. Cooperative education can provide opportunity for him/her to explore that career and see how it relates to others.

Social Development

Social development is an integral part of cooperative education in that students can develop self-confidence and reduce shyness as they gain new skills and job experience. Co-op students will have the opportunity to improve communicative and interpersonal skills by using them on the job. They can also clarify interpersonal and professional values. Co-op students, as a group, usually have higher grade point averages, fewer failures, a higher degree of persistence, and fewer dropouts than non-co-op students. These positive results derive partly from the students having expanded their understanding of their major subjects through the applications required on their jobs.

Career Preparation

Co-op provides career preparation by permitting the student to add practical experience in his chosen field to the theory gained in the classroom.

A Job and Earning While Learning

Most students now must work to earn at least part of their college expenses. With the help of the co-op programs their jobs will be doubly helpful by being in or closely related to the fields of their academic majors.

Ease of Transition from School to Work

Transition from school to work after graduation is made easier for students because their co-op employers are familiar with them and their work. After having co-oped, they can present themselves to any employer as having some experience.

Serving Business and Industrial Communities

By helping to satisfy the constant demand of business and industry for talented, skillful employees the college can achieve as in no other way a unique merger of "town and gown" advantageous to all participants concerned.

DISADVANTAGES OF CO-OP

In addition to its advantages, co-op does have drawbacks.

1 **Cost of co-op.** Co-op requires a full-time director or coordinator whose salary is a completely new expense to the college. He/she will, of course, require secretarial assistance and, should the program grow sufficiently to warrant it, additional help with his/her duties. Coordinator contacts between the college and employers may be made by the head of the program, but if it is of any size at all, additional coordinators must be recruited from the various college departments. Since they will require release time to perform the additional work, that much of their salaries is directly chargeable to co-op. Additional office space, supplies, equipment, printing, postage, travel, public relations media, etc., required by the program are chargeable to co-op, only.

2. **Schedule changes.** Another disadvantage of co-op is that it nearly always necessitates schedule changes, some of which will increase costs. Although we haven't yet discussed methods of conducting cooperative education, it is likely that most methods will result in a student's being on a co-op assignment when a required subject is scheduled at college. Therefore, another section of that class must be offered when the student may pick it up. And unless the number of students ordinarily warrants extra sections, this could be quite uneconomical. By and large, co-op can, at least in its initial stages, result in fewer students in some classes and in the need for more classrooms. Some types of courses require no special equipment but simply a standard class room. Where labs and special equipment are involved, however, the cost is greater and school administration may resist. Maintenance, repairs, and remodeling scheduling may have to be changed and costs may go up due to intensive and additional use of buildings and facilities.

ADDITIONAL CONSIDERATIONS

Another element in a cooperative education program may be faculty resistance. When students co-op, they bring in new ideas and many questions from business and industry. They may come back from co-op jobs having operated equipment the faculty never even heard of! Some faculty members may feel threatened by the change so they will resist the co-op program. Also, some faculty members may resist the increased need to frequently upgrade their courses to accommodate advances in the business world. On the plus side, some instructors would welcome year-round instead of nine-month contracts. Through business and industrial contacts teachers may also develop a clientele for consulting work.

Although there are many different kinds of student work/study programs in operation at the college level in this and other countries, for one to be properly identified as co-op, it should meet certain criteria.

a) Ideally, the work experience should be related as closely as possible to the student's major field of study (although some very responsible and respected co-op authorities maintain that interpersonal relationships, communications skills, etc. learned on the job are just as important).

b) The employment must be a planned, regular, essential part of the education plan.

c) Minimum amounts of employment and performance standards must be specified.

d) The co-op work experience should increase in difficulty, responsibility, and content as the student progresses, so that work experience parallels as closely as possible the classroom learning.

Because it is a bona fide, full-blown program, cooperative education has far-reaching effects on any college adopting it. Many considerations will have to be dealt with, some of which will call for administrative policy decisions. For instance, Ohio Board of Regents standards now specify that one credit hour per term be earned for each 10 hours per week of co-op work. By these standards a student on 40 hours of co-op per week earns 4 hours of credit. Many institutions which normally require the student to carry at least twelve credit hours for a full-time rating have amended their thinking to grant full-time status to the student who is co-oping on a regular basis.

CO-OP INFORMATION SOURCES

Organizing a co-op program requires drawing upon all available information sources. Many fine seminars are conducted throughout the country and throughout the year. They are well publicized in the various newsletters which will spell out the subjects to be covered and the personnel groups for which the various seminars are designed.

The program director should also arrange personal visits to co-op people who have already set up successful programs in colleges like his/her own and, if possible, have them on his/her advisory committee. Since the process of planning and implementing a successful cooperative education program is so very complicated, consultation with nationally recognized experts — and co-op staffs from successful programs — is most advisable. Much help can be obtained from any of the four Cooperative Education Centers in the U.S., whose addresses follow:

Northeastern Center of Cooperative Education
Northeastern University
Boston, MA 02115

Southeastern Center for Cooperative Education
University of South Florida
Tampa, FL 33607

Midwest Center for Cooperative Education
University of Detroit
4001 West McNichols Road
Detroit MI 48221

Midwest Center for Cooperative Education
University of Detroit
4001 West McNichols Road
Detroit, MI 48221

Western Center for Cooperative Education
University of the Pacific
Stockton, CA 95211

Just a note to any of these centers will put a program director's name on their mailing lists for newsletters and other equally helpful information they dispense. Sometimes, too, arrangements can be made for the experts to make "house calls."

NAMES AND ADDRESSES OF ADDITIONAL SOURCES OF INFORMATION ON COOPERATIVE EDUCATION*

Cooperation Education Association
Indiana State University
Terre Haute, IN 47809

Cooperative Education Division of the
American Society for Engineering Education
One Dupont Circle, Suite 400
Washington, D.C. 20036

National Commission for Cooperative Education
360 Huntington Avenue
Boston, MA 02115

John L. Chase, Chief
Cooperative Education Branch
Division of Training and Facilities
U.S. Office of Education
7th and D Streets, S.W.
Washington, D.C. 20202
(202) 245-2280

*See Bibliography Section, also.

PERSONNEL

Absolutely indispensable to the success of any co-op program is a knowledgeable, dedicated, enthusiastic director. The best place to begin the search for a good director would be among the ranks of those already in, therefore acquainted with, cooperative education. Otherwise, even the most talented person will have to spend a significant amount of time learning co-op from the terminology and philosophy on up.

The next most logical person to take on the director's duties will probably be a veteran of a number of years in industry, with a college degree and, ideally, some teaching experience. He/she should be familiar with business and industry problems, at ease with executives, and should be well acquainted with the relevant entities of concern to the program's geographical area and educational program.

The director's education and background should qualify him/her for academic rank, so that he/she can relate professionally with the faculty and so that the faculty will realize that co-op is an educational program. If the faculty doesn't accept the director, they probably won't accept the program, either. Also, the director should be **full time**. Anything less will give the impression that the program doesn't have much priority with the administration. The enthusiasm of the director is an absolutely vital element in gaining faculty approval and convincing everyone involved — both inside and outside the college — of the merits of co-op.

In most cases the salaries of co-op personnel are (and should be) equal to salaries of academic rank. Whether the director of the program is adjudged to be the equivalent of a departmental chairman, department head, professor, or assistant professor, he/she should receive an equivalent salary.

Co-op coordinators (job developers) are also vital cogs in the program. They can be obtained from among the existing college faculty on a release time basis or brought in from the outside. However, job development is a highly specialized endeavor and requires specialized instruction before it can be approached and accomplished properly. Efficient, effective ways of developing prospects, making calls, and consummating agreements are all arts which must be taught to the uninitiated. In cases involving two-year technical colleges, employers may have to be sold first on the competence and integrity of the technician and the associate degree before they will even consider the cooperative education program.

Coordinators will be making nearly all the contacts, so they must be thoroughly oriented in co-op records, procedures, etc. And since they will be interviewing students, their capabilities in that direction should be checked out, too. These people will be the personification of the college to a significant portion of the community, so their quality and capabilities must be beyond question. Training programs for co-op coordinators are conducted once or twice a year at many places like the Northeastern University Center for Cooperative Education, Northeastern University, Boston, MA 02115. Many fine aids like the booklet entitled "A Coordinator's Guide to Selling Cooperative Education" are available from the National Commission for Cooperative Education, 360 Huntington Avenue, Boston, MA 02115.

Not too surprisingly, it is not the students who are out on co-op jobs who create the most work for the college's co-op staff. It is the on-campus students being interviewed, classified, wondering what they're going to be doing next term, etc. Sometimes outsiders are inclined to think that the people running the co-op program have nothing to do once some students are out on the job. Nothing could be further from the truth! Job development, public relations, taking applications, student and faculty orientation, reports, etc. are all operations without end.

AREAS OF FUNCTION
FOR COOPERATIVE EDUCATION DIRECTORS

The following functions and job descriptions merely outline the scope of activities and skills required by those who will be working on the co-op program.

Area I — Placement and Job Supervision Role

1. Initial recruitment of employers.
2. Screening and selection of employers.
3. Development of participating employers to improve the quality of students' job experiences.
4. Evaluating the job performance of students through conferences with students and employers.
5. Conducting seminars for employed students during the quarter or semester of their participation.
6. Assigning and evaluating term or semester co-op reports for students involved in the program.
7. Developing training plans or student learning objectives for students involved in the program.
8. Assisting co-op graduates in finding appropriate permanent employment opportunities related to their program of study.
9. Insuring continuity in terms of employment opportunities for co-op students.
10. Development of training agreements which clearly specify the responsibilities of the employer, student, and the college.
11. Conducting workshops and seminars for participating employers.
12. Matching students with available jobs in business, industry, and government.

Area II — Counseling

1. Working with students in terms of academic scheduling.
2. Collecting and disseminating occupational information to assist co-op students in career planning.
3. Counseling individual students regarding their educational, vocational, and personal development.
4. Working with students who experience work adjustment problems.
5. Conducting pre-employment seminars for students who are new to the co-op program.
6. Assembling individual student records as required for career counseling and placement.
7. Collecting and developing appropriate information required for the establishment of a career resource center.
8. Testing and assessing student needs.
9. Conducting personal interviews with students.
10. Recruiting and selecting students for participation in the cooperative education program.

Area III — Administration

1. Preparing requisitions for supplies and equipment, and maintaining an inventory of equipment assigned to the cooperative education office.
2. Preparing routine correspondence and other paperwork required for the day-to-day operation of the cooperative education program.
3. Administering the budget and other financial resources.
4. Supervising and administering the policies for cooperative education at the institution.
5. Supervising co-op coordinators who assist in the operation of the co-op program.
6. Recruiting, screening, and selecting co-op coordinators.
7. Working with the various academic departments and divisions to schedule classes or courses.
8. Assigning the responsibility for coordination of students to co-op coordinators.
9. Establishing and maintaining a student record keeping system in the cooperative education office.

Area IV — Planning and Evaluation

1. Evaluating the cooperative education program (conducting studies designed to improve the excellence of cooperative education at the institution).
2. Developing and reviewing long-range goals for cooperative education.
3. Preparing the annual report detailing the progress of the program
4. Preparing state and federal proposals as required for program funding.
5. Preparing and presenting a proposed budget for cooperative education.
6. Conducting follow-up studies of co-op trainees who have completed their assignments.
7. Evaluating the satisfactoriness of participating employers (continuously evaluating the quality of employment situations).
8. Developing and implementing short-range goals for cooperative education at the institution.
9. Soliciting employers' opinions concerning the quality of the cooperative education program.
10. Conducting surveys of prospective students and employers.

Area V — Leadership and Public Relations

1. Listening to and encouraging ideas to improve the functioning of cooperative education.
2. Facilitating communications among faculty and administration not involved in the daily activities of cooperative education.
3. Articulating cooperative education with secondary or post-secondary institutions.
4. Maintaining liaison with faculty and administration through college and university committee participation.
5. Working with advisory committees which provide guidance to the co-op program.
6. Attending professional state and national meetings and conferences.
7. Preparing brochures, writing news releases, and other promotional activities.
8. Speaking before on- and off-campus organizations to promote cooperative education.
9. Developing administrative support of the program.

10. Soliciting and maintaining faculty involvement in the program.
11. Providing in-service education and training for coordinators involved in the program.
12. Developing and reviewing catalog information related to cooperative education.
13. Interacting with the administration on behalf of the co-op program.

POSITION DESCRIPTION

Position Title: Coordinator of Cooperative Programs

Reports to: Director of Cooperative Education

General Position Description: Responsible on a day to day basis for developing and expanding the cooperative education program. Coordinate student placement and develop specific work experience opportunities for students with appropriate employers.

1. Develop, in cooperation with the Director, a planned management by objectives strategy to deal effectively with the responsibilities of the position.

2. Seek out and develop cooperative jobs in business, industry, government, and service agencies for students in the cooperative education program. Identify specific needs for cooperative assignments and plan travel schedule monthly to meet goals.

3. Coordinate and supervise the cooperative employment of an assigned group of students.

4. Follow up cooperative placements with on-site visits to check student performance.

5. Assist and counsel students in identifying appropriate career paths and aid in securing cooperative assignments compatible with student interest and needs.

6. Maintain contact with all college departments and divisions to insure coordination of objectives and meeting of student needs.

7. When necessary, work with specific college representatives in planning student schedules and work assignments.

8. When working with an alternating program, make assignments that provide continuity of coverage.

9. Maintain close and continuing contact with employers to promote a positive relationship with the College.

10. When appropriate, conduct group orientation sessions on cooperative education.

11. Develop a schedule for regular visits with high school officials and guidance counselors to make them aware of cooperative opportunities at the College.

12. Maintain accurate and current records on students for counseling and placement purposes.

13. Maintain accurate and current records on participating and potential employers. (File appropriate travel reports on return to campus.)

14. Assist in developing forms and reports essential to successful program operation.

15. When special counseling problems occur, make referral to appropriate department.

16. When necessary, or appropriate, and to the extent possible, aid students encountering problems with other college departments interfacing with cooperative education.

17. Aid in generating and collecting data for program evaluation.
18. Perform other tasks as may be assigned by the Director.

POSITION DESCRIPTION

Position Title: Secretary for the Office of Cooperative Education:

Reports to: Director of Cooperative Education
One support person will be needed for every two to three coordinators.

General Position Description: Responsible on a day-to-day basis for the efficient and smooth operation of general office work.

Responsibilities:

1. Provide clerical services for the coordinator(s) to whom assigned.
2. Answer the telephone and greet callers.
3. Make appointments with students, etc.
4. Take dictation and type letters and other material such as trip reports, etc.
5. Do the general office filing.
6. Maintain records of students, interns, etc.
7. Prepare monthly absentee reports, time cards, personnel action reports, etc.
8. Prepare travel vouchers and travel requests.
9. Keep supplies up to date.
10. Do research work for Director when needed.
11. Maintain neat appearance of offices.
12. Make calls for the Director.
13. Summarize survey reports.
14. Perform other tasks as may be assigned by the Director.

CO-OP'S POSITION WITHIN THE SCHOOL'S STRUCTURE

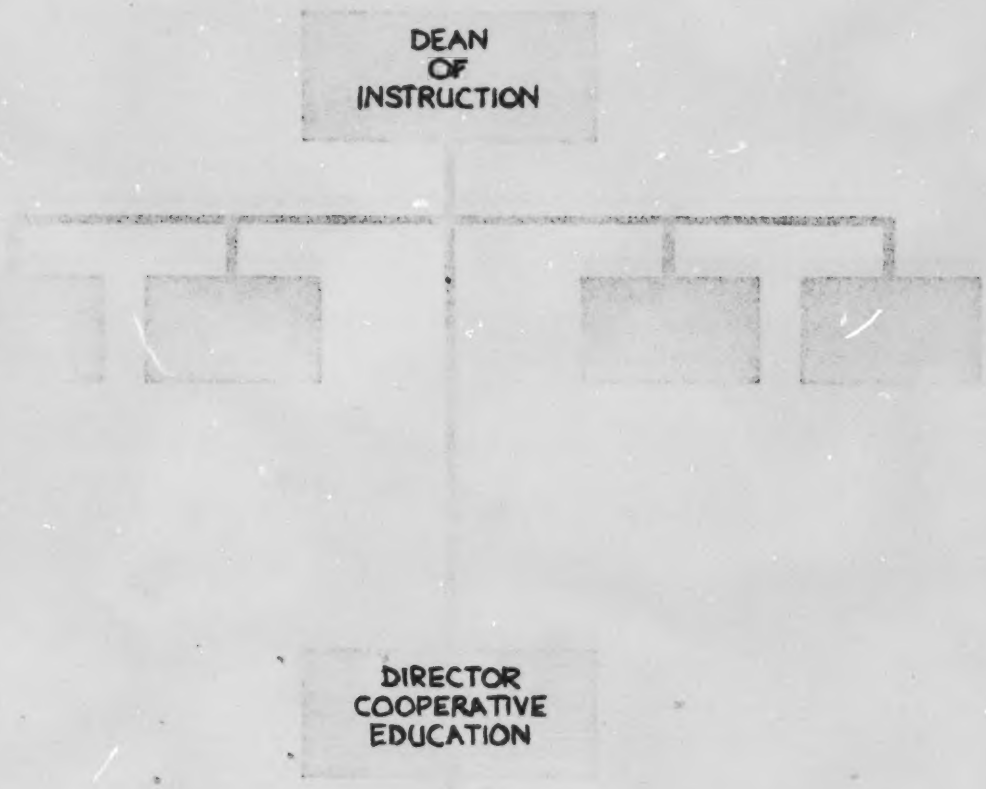
Occasionally and with diminishing frequency the co-op department will be combined with student placement and services. However, it seems more practical and popular to align co-op with academic functions because of greater stability in funding. Duplication of facilities is nearly inevitable but should be held to a minimum. All in all, enough factors are involved to qualify co-op's placement as a problem requiring a local decision. It is possible to make a good case for attaching co-op to student affairs.

The cooperative education program may be integrated into the college organizational structure in either of two ways, centralized or de-centralized. Because of the academic/experiential learning required by the student, and the resultant awarding of credit hours, however,the academic division is the likely place for the program.

On page 12 is a typical example of the preferred centralized program, which is more economical and efficient.

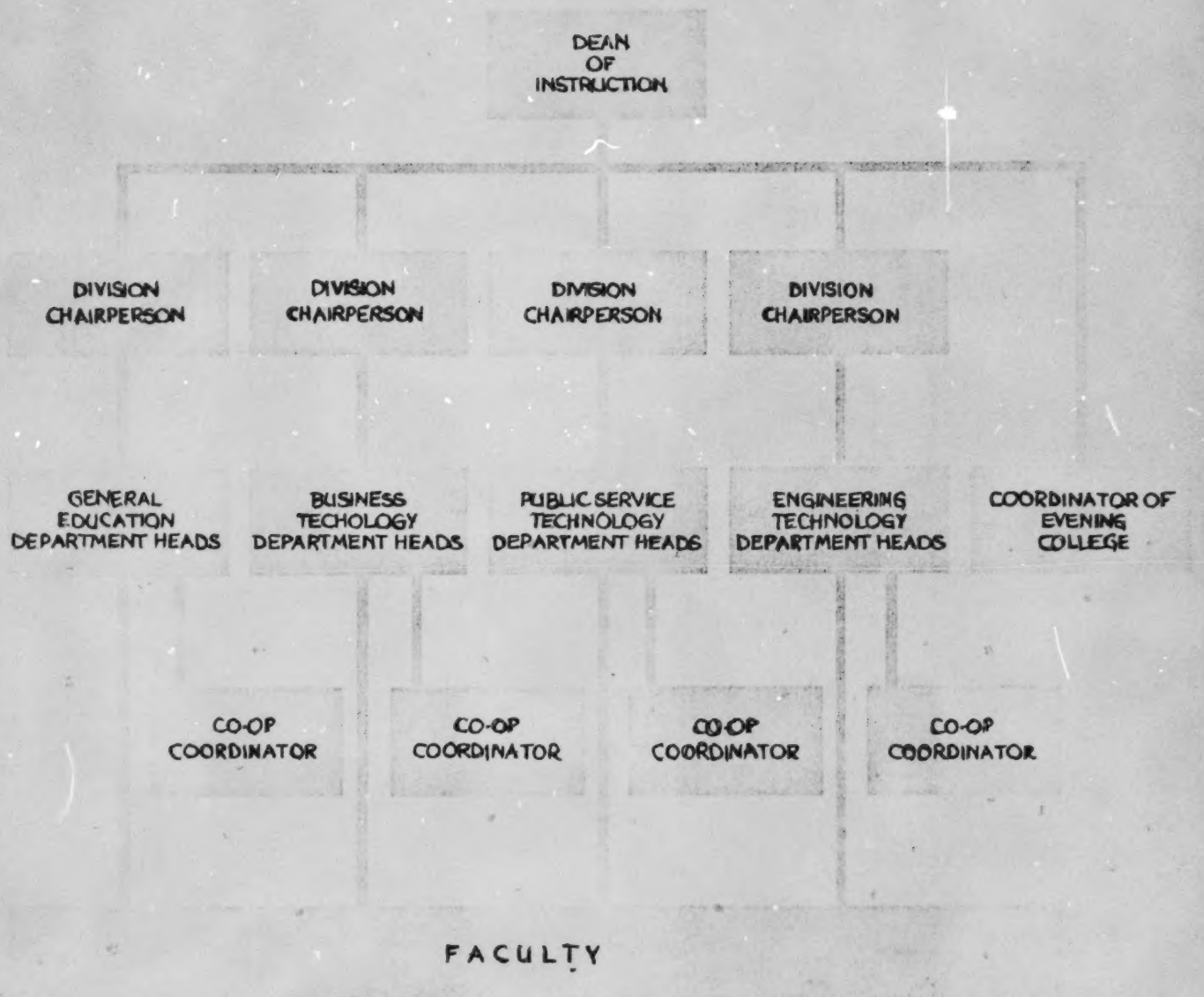
In a decentralized program (see page 13 for a typical example), each department takes care of its own students. Depending on the number of students involved, the coordinator may be either full- or part-time. One advantage of decentralization is the ability of each department to supervise and evaluate its own students, although a carefully run centralized program can really do the same thing. Perhaps the most serious disadvantages to the decentralized approach are duplication of effort and lack of coordination. Many employers will use students from several different disciplines and quite often good assignments will remain vacant in a decentralized program because of the difficulty involved in contacting every campus person connected with co-op.

CENTRALIZED SET-UP



DECENTRALIZED SET-UP

(Example only)



PLANNING COMMITTEE

The planning of a Cooperative Education program is so complex that it nearly always requires the thinking of more than one mind. For this and other equally obvious reasons it makes good sense to have employers and other representatives of business, industry, and government on the planning committee. Equally necessary for the value of their points of view on a program which affects them all are representatives from the college administration, the faculty, and the student body.

Obviously, if all people chosen for the committee (even if they agreed to serve) were against co-op, there would be only obstructionism and the program wouldn't have a chance. It would be similarly unwise, however, to choose only people who are blindly supportive of co-op. Somewhere between these two extremes the program can benefit from both the enthusiastic supporters and those who, perhaps a little more objectively, can foresee bona fide objections and pitfalls.

The planning committee should have no more than twelve members and should be predominately "internal" — having more school representatives than outsiders. It's a good idea to strive for diversity, drawing members from both large and small companies, business, industry, government, co-op graduates, etc. Generally speaking, executives and managers are most desirable.

The planning committee would have the overall responsibility for planning the Cooperative Education program. This is a big task for one committee. It might be well to consider setting up sub-committees within the total committee to work on specific areas. The following sub-committees are recommended if they are not already established on the campus.

A. **Curriculum Committee**
   Responsibility: Review implications of Cooperative Education for total curriculum, recommend revisions, decide status and degree requirements of Cooperative Education Program in curriculum, etc.

B. **Fiscal Committee**
   Responsibility: Review fiscal implications of program for students and college, recommend changes in fiscal policy regarding tuition, fees, etc., develop fiscal policy for long range commitment of institution to Cooperative Education.

C. **Calendar Committee**
   Responsibility: Study the several calendars possible for Cooperative Education program and how they affect the whole institution; recommend calendar for adoption.

D. **Student Affairs Committee**
   Responsibility: Study effects of Cooperative Education on student life, activities and organization and plan for smooth transition to a more mobile student body.

E. **Interpretation Committee**
   Responsibility: Coordinate and plan for wide dissemination about Cooperative Education and the institution's plan for its program; build an atmosphere of understanding and acceptance.

Key faculty members should be placed on the planning committee along with students and administrators. This point cannot be stressed too strongly. If the faculty is to support the program, the end product must have key faculty input coupled with that of students and administrators.

Provision must be made for a review and appraisal of the total program by departmental chairmen and/or deans prior to final submission to the Director or the academic vice president. If some, or all, are on the committee this will not be necessary. The point is that less adverse criticism is likely if these persons have at least had an opportunity to react to the proposal, whether favorably or unfavorably.

There must be the development of an understandable statement of objectives and goals of the Cooperative Education program as they relate to the college's goals and long-range objectives.

It is impossible to formulate a model which will answer all questions, so any effective co-op planning will include visits by the planning committee to institutions having successful and effective cooperative education programs. During investigatory visits to other **comparable** schools, a list of questions prepared before arriving will insure the most efficient use of the time allotted by the hosts. Some of the topics that may be discussed include:

1. Office and equipment requirements of the co-op director, coordinators, and secretary. Space for a reception room and interviews, library, storage, records, etc.
2. Reporting channels and the persons involved.
3. Duties, work load, student load, and outside activities demanded of all co-op personnel.
4. Organization of the co-op office and academic status of its personnel.
5. Duties and student load of each staff person.
6. Is the program centralized under one director for the entire school? Operated by individual departments? Is there a central office with coordinators in each department?
7. Is the program decentralized, with coordinators attached to academic departments, student services, or student personnel?
8. Are there written policies governing students, employers, and college?
9. What are the procedures for coordinating student selection, counseling, and placement?
10. Is their program alternating, parallel, or other?
11. What curriculum, scheduling, and facilities usage problems have they encountered?
12. What are their procedures for recruiting employers and students?
13. Get as much budget information as possible.
14. Special placement or student problems both on the job and in school.
15. Employer coordination problems.
16. Fees, registration, and financial aid.
17. Awarding of scholastic credit.
18. Does a co-op program ever pay its own way in a college or university?
19. Are there any problems involving veterans or other groups?
20. Problems involving any branch or echelon of government?

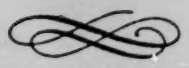
ADVISORY COMMITTEE

A logical next step would be to set up an employers' advisory committee comprising representatives of the faculty, of business, industry, government, and any other group that might employ co-op students. Unlike the planning committee, this advisory committee should comprise a preponderance of **external** personnel. Their function as advisors will serve not only to acquaint the college co-op personnel with their needs, desires, and preferences but — identical with the very concept of cooperative education — acquaint them more thoroughly with how theoretical classroom work and on-the-job practical experience dovetail with each other. Additionally, contact with and advice from these indispensable people will provide an ideal sounding board for their opinions and perfect opportunities to cement relations with them. Their expertise in their unique fields will be invaluable to the college personnel implementing the co-op program.

Special attention should be given to quantity, quality, and diversity in the forming of the advisory committee. Any fewer than six people is certain to prove unsatisfactory now and then because of unavoidable periodic absences which will leave too few committee members for a quorum or to function adequately. On the other hand, more than twelve members would tend to be unwieldy.

It would be wise to have perhaps three faculty members on the advisory committee, not only for their valued contributions and to retain faculty support for co-op by keeping them involved, but to have them hear and interact with the advice of the "outsiders." And this group of outsiders should be well diversified. It should have representatives from companies already using co-op students as well as from companies just getting interested. Small and large organizations should be represented. Of course, a difference in business natures and products will be helpful, too, because it will probably insure the inclusion of people interested in every co-op program and discipline offered.

Competency-based education is very much accepted today, and what better way is there to find out what competencies a student needs than through the Cooperative Education Advisory Committee? (A sample Cooperative Education Advisory Committee Constitution follows.)



CONSTITUTION OF THE COOPERATIVE EDUCATION ADVISORY COMMITTEE TO THE TECHNICAL COLLEGE

THE NAME AND PURPOSE

The name of the Committee shall be "Cooperative Education Advisory Committee to the Technical College."

This committee is to provide advice and counsel to the administration and faculty of Technical College for the purpose of providing quality cooperative education programs. The committee will serve in an advisory capacity to assist where possible in the improvement of curricula and of training facilities and equipment; to assist in maintaining high standards of student selection, instruction and achievement; to assist in keeping the community informed of the purpose and objectives of the college.

MEMBERSHIP

Members of this Committee shall be persons whose work is related to the courses being offered and who are representatives of business, industry, government, technical associations, or educational institutions.

ORGANIZATION

The Committee shall consist of twelve members, except as hereinafter provided. Terms of Committee members shall be three years. Of the original Committee membership, four members shall serve for three years, four members for two years, and four members for one year. In order to provide maximum continuity, the past-Chairman shall serve as a member of the Committee for one year immediately following his term of office as Chairman. In the event that the Chairman's normal three year term as a Committee Member expires at the same time as his term as Chairman, the Committee may be temporarily enlarged to a total of thirteen members during the following year to enable him to serve as a Committee Member. The Chairman shall appoint a Nominating Committee, consisting of three members of the Committee, prior to the Annual Meeting which will submit a slate of candidates to the Chairman of the Cooperative Education Advisory Committee and to the President of Technical College who shall retain the final right of appointment.

It is the intent of this Constitution that no Committee member should succeed himself on the Committee. However, in the event of special circumstances, this rule may be suspended by unanimous vote of the Nominating Committee, the Chairman of the Committee and the President of the College.

Vacancies on the Committee shall be filled by the Chairman subject to the approval of the President to serve out unexpired terms. Vacancies in the Offices of the Committee shall be filled as follows. The Chairman to be replaced by the Co-Chairman. The Co-Chairman to be replaced by a vote of the full membership of the Committee in line with normal procedure at the following meeting.

The Officers shall consist of a Chairman and a Co-Chairman, the latter serving also as Secretary for the Committee. The Committee shall meet for organization and installation of officers at the first meeting following the Annual Meeting of the Committee. The Co-Chairman of the preceding year shall succeed to the Office of Chairman. The Committee shall elect from its own membership the Co-Chairman. These officers will serve for a term of one year or until their successors are elected and qualified.

Each year the Nominating Committee shall place the names of candidates for Co-Chairman on a secret ballot together with voting instructions and space shall be provided thereon permitting each member to vote for a person other than those recommended by the Nominating Committee. This ballot shall be given to all members present at the Annual Meeting during which the voting will take place. The Chairman will designate two members to count the ballots and report the results to the Committee at the Annual Meeting.

The Officers shall be eligible to continue in Office for one additional term.

The Chairman may appoint such subcommittees as may be deemed expedient. He shall assign their duties and affix their responsibilities. The Co-Chairman assumes the duties of the Chairman in the absence of the Chairman.

CONSULTANTS AND GUESTS

Persons in vocational or technical education within the area served by the Technical College may be invited by the officers of the Committee to attend any meeting as Consultants, should the need arise.

Persons in business, industry, public service and the professions whose knowledge and experience may contribute to accomplishment of objectives may be invited by the officers of the Committee to attend any meeting.

MEETINGS

The Committee shall meet at least bi-monthly beginning in August and ending with the June meeting which shall be designated as the Annual Meeting. A special meeting may be called by the Chairman or on written request of four (4) members.

Members are required to attend all meetings or to provide an alternate acceptable to the Chairman. Past Committee members shall be given preferential consideration in serving as alternates. Alternates for Officers do not assume the duties of such Offices. Alternates may vote for the members whom they represent.

ORDER OF BUSINESS

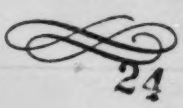
The order of business of the Advisory Committee shall be:

1. Call to order
2. Calling the roll
3. Reading of the Minutes
4. Report of Officers
5. Reports of Committees
6. Unfinished business
7. New business
8. Close meeting

PARLIAMENTARY AUTHORITY

Conduct of the meeting shall be informal and consistent with standard practice. Any conflict which may arise with respect to rules of order shall be resolved in accord with "Robert's Rules of Order" unless otherwise covered by this constitution.

The Constitution may be amended by two-thirds vote of the full membership of the Committee providing written notice of the amendment is sent to all members of the Committee at least 10 days prior to the next meeting.



Although circumstances and details for setting up co-op will vary from place to place, the steps listed next are representative and fairly comprehensive so they should serve well as a guide for individual situations.

To investigate the feasibility of cooperative education and plan its implementation, first list all required procedures and sub-procedures in order of priority. It might help to list also the persons responsible for each step. Areas, spaces, physical equipment, and personnel required should be recorded, too. In conjunction with this listing, it is sometimes helpful to make a flow chart of procedures, personnel, equipment, etc. The visualization is not only easier to absorb, it is also easier to check for completeness, accuracy, and progress.

Sequence of Steps and Activities for Making a Co-op Feasibility Study

1. Get approval of idea from appropriate administrative body.
2. Establish a planning committee consisting of college personnel representing a cross section of administration, academic department heads, and student services.
3. Obtain allocation of sufficient funds to enable the planning committee to make investigatory trips to co-op workshops and seminars and to other institutions with successful co-op programs.
4. Compile information into report form describing:
   a. Co-op benefits to students
   b. Co-op benefits to faculty
   c. Co-op benefits to the college
   d. Co-op benefits to the employer
5. Survey student body for interest.
6. Survey business, industry, and government (employers).
7. Establish advisory committee.
8. Draft a tentative co-op plan for the college showing:
   a. Disciplines to be included
   b. Type(s) of scheduling (alternate, parallel, etc.)
   c. Numbers of students anticipated
   d. Numbers and types of work stations needed
   e. Personnel requirements
   f. Probable organizational alignment
   g. Physical requirements (offices, equipment, etc.)
9. Draft a budget and funding plans.
10. Present findings to administration and advisory committee.

A timetable for setting up a Cooperative Education Program in a two-year technical college, dating back from the time an institution's first student will enter an assignment or training period, might look like this:

Days Prior to Students Reporting For First Training Period	Action
350 days	Decide to go into program.
350 days	Interview candidates for director, co-op secretary, coordinators, etc.
290 days	Director reports for duty. Visits other programs. Trains job developers. Planning period for director, publishing of folders, brochures, setting forth aims of program and details of operation.

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185 days	Beginning of 20-day period of informing faculty, seeking their help.
165 days	Recruit cooperative employers
95 days	Students apply for program.
75 days	Begin interviewing students.
15 days	Complete interviewing students.
15 days	Students register for the Training Assignment.
D-day	First students report for Training Assignment.

The program should have supporting assistance from such other auxiliary services as:

1. Counseling and testing services
2. Housing
3. Financial aid
4. Registrar's office
5. Advising (curriculum, course schedules)
6. Library
7. Student Association (or student government)
8. Placement and/or career planning

Role of MBO in Co-Op. Cooperative education program management techniques are sometimes lacking, and frustration may be created by multiple management problems. A cooperative education program manager has to be a counselor, a manager, a teacher, an administrator, a manager of public relations, and on and on. Just managing these various roles creates problems. MBO (Management by Objectives) might be one workable solution.

What are some of the principles of MBO? One thing common in this system is a specific attention to purpose and to results instead of activities alone. With MBO a manager knows where he or she wants to be by a specific date and has a clear idea as to how to recognize when the objectives have been achieved.

What is MBO? MBO is simply a system under which people involved with the management of a program sit down at the beginning of each time period and talk until agreement upon specific goals is reached. Wide latitude in choice of method of reaching the goals is created. At the end of the time period, actual results are jointly reviewed against agreed-upon goals and an assessment of the degree of the success is made. This process is then begun for a new time period. This describes the goal setting or objective setting process which is one of the most common forms of MBO. The activities of a cooperative education program can be better managed with a system of planning more specifically the activities we engage in from day to day.

Why Management by Objectives?

1. Motivation and commitment to achieve important objectives are increased as more emphasis is placed on participation in goal setting.

2. Planning is more complex since discussion of objectives includes the determining of the resources needed to accomplish the objectives.

3. Coordination is more effective because well-defined objectives help integrate the activities of the many people worked with in cooperative education. MBO elicits voluntary cooperation of those whose contributions are essential to the achievement of these objectives. This indicates that a cooperative education planning committee could be helpful in planning the objectives to be achieved within a time period and making suggestions for the flow of activities within that time period. The expertise of business managers on advisory committees would be helpful.

4. Control shifts from evaluating the manager to evaluating how well things are managed.

5. Some flexibility is built into the management system because the manager knows the program objectives and orders of priority, and he has action plans and control measures that specify an acceptable level of performance for the activities to be performed. MBO fosters the more immediate response to deviation from standard activity or to a change of activity.

6. The cooperative education manager and co-workers' relations are improved as the co-workers move from a position of dependence to one of independence. The co-op manager moves from a directive role to a supportive role.

7. Development of the people working with the co-op manager and the growth of the manager occur, because MBO encourages each to assume responsibilities for his or her own performance. This provides opportunities for increasing knowledge, skills and experiences so the manager can perform various duties connected with his job more efficiently.

MBO allows a manager to know where he or she wants to be by a specific date and **offers a clear idea of how to recognize when the objectives have been achieved.** This means that planning a cooperative education program must fall into specific time periods. Secondly, the plan for how to achieve the objectives of a certain time period calls for a flow of activities that progressively lead to the accomplishment of the objectives.

Sequence of Activities of Procedures in Planning a Cooperative Education Program

An indispensable aid in establishing and achieving objectives is an activities flow chart. This planning tool enables the program director to project the sequence of steps necessary in the year-long process of planning and implementing a cooperative education program and tracking its progress. The activities flow chart can also be adapted to short-range objective planning, e.g., establishing new employer contacts or expanding co-op into more departments within a college.

The activities charted below should be altered to accomplish the objectives stated for the particular type of program being planned. Flowcharting the activities sometimes requires showing simultaneously performed operations sequentially. Public relations activities, for example, necessarily span the times allotted to many other steps. Employer recruitment is another simultaneous, continuous task. Activities should follow an evenly paced, logical plan of operation, with specific deadlines for phasing out each activity based on either four phases (quarter system) or three phases (semester system).

Phase I — Objective:
To explore cooperative education for feasibility.

1. Establish planning committee (student, faculty, administration, alumni, special offices, industry representatives).
2. Visit good existing program types.
3. Attend training workshops.
4. Include placement office, financial aid, registrar and business offices.
5. Establish planning procedures flow-chart (priority, time limit basis).
6. Meet more business leaders in community.
7. Contact high school counselors, upward bound, etc. (groups dealing with pre-college students).
8. Establish an operating office.
9. Have consultant visit.
10. Place some test students for experience in procedures.

Phase II — Objective:

To establish the cooperative education office and test idea.

1. Prepare information forms (flyer on program being planned.).
2. Prepare Phase I progress report.
3. Prepare forms showing benefits to students, faculty, institution, employers, community, public relations, fiscal benefits.
4. Consultant visits (student and job recruitment).
5. Attend employer type meetings (Chamber of Commerce, personnel associations, etc.).
6. Visit established programs.
7. Send planning committee to workshops.
8. Add to implementation proposal for the following year's program.
9. Prepare operational forms.
10. Exchange students with established cooperative education programs.
11. Place some students for experience in procedure.
12. Limit the types of services offered.
13. Plan credit contracting.
14. Examine budget progress.
15. Re-establish program planning objectives into new priorities.

Phase III — Objective:

To establish operations; sell program; begin summer placements.

1. Report on Phase II.
2. Establish evaluation procedures.
3. Create options (various models or calendar for students).
4. Re-evaluate operating policies.
5. Print revised operating forms.
6. Establish credit procedures.
7. Establish criteria for expanding operations.
8. Expand into new territory, new student types, new employers, new service.
9. Elicit more alumni help in expanding placement territory.
10. Establish consortium type communications with other programs.
11. Examine job bank possibilities.
12. Consider services of Institute for Off-Campus Experience and Cooperative Education at Northeastern University (or similar agencies).
13. Examine budget against objectives.
14. Establish three-year program objectives.
15. Establish second year implementation and expansion.
16. Re-establish program objective priorities.

The above sequence represents but one MBO technique that cooperative education directors can use. Further study and application of MBO techniques used in business can help insure smoother operation of programs.

Since experience is such an effective teacher, evaluation of the work to date can be most useful. Some typical steps to use in the yearly evaluation of the co-op program appear below.

EVALUATION AND RESTRUCTURING

A. Immediate Evaluation of School

1. Recruiting of students and employers
2. Reaction of faculty
3. Initial work assignments
4. Contribution of co-op students to departments

B. Employer

1. Quality of work assignments
2. Variety of employers available
3. Developing prospects

C. Co-op Program

1. Effect of recruiting
2. Staff work load
3. Operation of program

*Reprinted from the **Journal of Cooperative Education,** Vol. X, No. 2, May, 1974, pages 12-16.

DEVELOPMENT OF PROGRAM POLICIES AND PROCEDURES

It is hardly possible to overemphasize the importance of carefully planned, well publicized and faithfully followed policies and procedures for the co-op program. Although situations from one college to another will vary enough to warrant individual consideration, rules and guidelines must still be recorded and observed at each institution, or the program is doomed to eventual failure. General requirements must be specific and articulated so that every student, faculty member, college administrator, and employer will know exactly where he stands, but flexible and open-ended enough to adapt effectively to the unforeseen. Probably additions and alterations will have to be made to the policies and procedures as the program ages and increases in size, but everything should be kept as simple as possible and new rules and regulations added only after determining that they are absolutely necessary and that they will help. Enough rigidity to provide a sturdy framework, but enough flexibility to allow for extenuating circumstances are the criteria to meet.

Some of the more or less specialized areas in which specifically to spell out policies and procedures are:

1. Admission requirements and procedures. Specify academic disciplines, minimum standards, grades, etc.
2. Married students. May they co-op? Do they require special concessions?
3. R.O.T.C. students, summer camps, meeting courses (if applicable).
4. Alternating schedule. What types will be offered? Can students go from one schedule to another?
5. Employer relations. Interview procedures. Placement procedures. Expectations. Goals. Controls. Evaluations.
6. Military Reserve. Provisions for summer camp and active duty periods.
7. Transfer students. Do they qualify? Do they have to establish themselves at the college? How, etc.?
8. Termination of program. How and for what reasons?
9. Handicapped students. How will they be placed? What limitations, if any affect them?

This is only a partial and potential list. All items pertinent to individual situations must be included.

PRESENTATION OF PROGRAM TO THE ADMINISTRATION

A really first-class presentation to the administration of the results of the feasibility study and the proposed implementation plan for the cooperative education program should be prepared by the study director.

The presentation must be complete, clear, logical in order, easy to follow, interesting, and as brief as possible. Clear and appropriate visual support will be most helpful — as will a **positive** attitude. Even when describing possible problem areas, the speaker should word his solutions in such phrases as: "When this program is actually implemented, we intend to . . ." If the presenter is not convinced, his audience can't possibly be.

There is probably no more reliable system of presentation to follow than the oft-tried and proven:

1. Tell them what you are going to tell them.
2. Tell them.
3. Tell them what you told them.

Introduction

Briefly review the history of the feasibility study.
Give a brief outline of your presentation.

Presentation

Define cooperative education.
Describe its benefits to the
- Student
- Faculty
- College
- Employers

Give evidence of support of the
- Students
- Faculty
- Employers

Describe co-op at similar institutions.
Describe local job opportunity situation by study discipline.
Give complete description of proposed plan of operation.
- Immediate and long-range plans
  - Procedures
  - Budget
  - Staff
  - Physical facilities
  - Others

Conclusion

Restate, briefly, the objectives
Reiterate the main points of the plan.
Answer questions.
Request implementation be accomplished as soon as practicable.

By no standard or analysis is cooperative education inexpensive. And few, if any, people are willing to say that it will ever pay for itself completely, especially in the formative stages. Co-op is definitely not a means of "keeping half the chickens in the air while the other half use the roost." Sooner or later all students must take all required courses, so they will probably be in the educational process longer. Although this will probably mean some additional revenue to the college, there are many added expenses against which that revenue must be balanced.

The salaries of the program director, the secretary (or secretaries), and the coordinators (job developers) plus the costs of travel, office and equipment overhead, consultants' expenses, etc., are all uniquely those of the cooperative education department. Required courses might have to be, at least until the numbers of co-op students become significantly large, offered to uneconomically small numbers who were off campus during the normally scheduled first offering.

When revenue is plotted against costs, a review of the many real and substantial advantages will probably be required to justify the cooperative education program. Two fiscal advantages are sometimes overlooked:

1. The community service aspect of establishing cooperative arrangements with employers gives the college fund raisers openings for soliciting financial support.
2. Many of the service departments such as library, admissions, student activities, student accounts, etc., do not have to be expanded in proportion to the larger student body.

Although co-op is not an immediate cure for the financial ills of college or student, in the long run it will effectively reduce both problems. However, it cannot flourish without adequate financial support, and a small, inadequate budget will result, in most cases, in an ineffective co-op program.

Part-time assistance for the co-op staff is most important. Routine tasks such as preparing mailing lists, putting up posters, running errands, etc., should be done by a work/study student rather than the secretary, a coordinator, or the director. As a recommendation, each co-op office should hire as many co-op students as it can use.

Co-op Costs

The costs involved in cooperative education may be viewed two ways:

1. If it will produce a better student, let's do it and find out later what the costs are.
2. If it's on a credit basis, how much income will it generate: therefore, is it justified?

An alternating program (in which students alternate school terms and work experience terms) is probably more costly than parallel because it allows placement of students over a wider area and therefore involves more travel. Many colleges are pulling back to within their states, even within a radius of 100 miles, to save travel expenses of co-op personnel. Two-year colleges will, of course, place nearly all co-op students locally. In the parallel program (here the student goes to school part of the day and works at his co-op job another part of the day) travel will probably be limited to a radius of 35 miles or so because of the student's travel time.

Another factor of cost is the number of coordinators required to handle and process the students. In the alternating program a full-time coordinator can handle around 100 students, 50 in the field and 50 on campus. In the parallel program that number would drop to about 60 or 80 because all students are on campus part of every day, requiring more servicing. If co-op is tied in very closely with the academic program, it means more field visitations with interim reports to verify that the co-op learning experience is remaining in line with the academic. Some colleges are not particularly interested in doing that. They feel that once the coordinator knows the employer's work station and training plans, no close follow up is required during the period. A written midterm report by the student may be required. Other than that, it may be felt that the student's

written end-of-term report, the employer's report, and a coordinator-student interview will be sufficient for evaluation and a grade.

(See "Record Keeping" section under "Awarding of Academic Credit" for Ohio Board of Regents' requirements for coordinator's contact with employers during a student's co-op period.)

Different philosophies of implementation and involvement will involve different amounts of work, therefore personnel and cost.

It is generally necessary to have a secretary or support person for every two to three coordinators. If adequate secretarial support is not available, a coordinator could be doing very well in the field but hardly know what's going on because of lack of internal record keeping. Whether or not credit is awarded, the extent, nature, and quality of the student's accomplishments should be recorded on his transcript — which takes a lot of record keeping. Added to the other required paperwork, it makes for a formidable amount of work.

Salaries for the director, coordinators, secretaries, and other staff involved, as well as costs of supplies, etc., are constantly shifting and should be reviewed before making up any cost analysis. (See Personnel section.)

The budget will, of course, vary from institution to institution. The following tables present an example of a first year budget and a projected five year budget.

Budget Category	Method of Calculation	Amount
Personnel		
Cooperative Education Coordinator (Director)	100% of annual salary	$16,740
Secretary	100% of annual salary	9,277
Dean of Instruction	5% of annual salary	1,539
Release Time for Division Heads		
A.	25% of annual salary	6,048
B.	25% of annual salary	5,676
Faculty Members		
A.	10% of annual salary	1,771
B.	10% of annual salary	2,170
C.	10% of annual salary	1,929
D.	10% of annual salary	1,999
Fringe Benefits	18.6%	8,512
Consultants (6 Days)	$100 per day	600
Travel		
Three-day workshop at ABC University	400 miles @ 15.5¢	62
	$35 per diem allowance for three people	315
Three-day conference at DEF University	400 miles @ 15.5¢	62
	$35 per diem allowance for three people	315
Four-day conference at GHI University	Round trip air coach for two people	304
	$35 per diem allowance for two people	280
	Taxis (estimated)	15
Four-day conference at AAA Center for Co-op Education, date TBA	Round trip air coach for two people	360
	$35 per diem allowance for two people	280
	Taxis (estimated)	15
Four-day conference at JKL University Co-op Training Center	Round trip air coach for two people	288
	$35 per diem allowance for two people	280
	Taxis (estimated)	15
Consultant Travel		
Consultant from Detroit (3 days)	Air coach round trip	76
	$35 per diem	105
	Taxi (estimated)	10
Consultant from Tampa (3 days)	Air coach round trip	190
	$35 per diem	105
	Taxi (estimated)	10

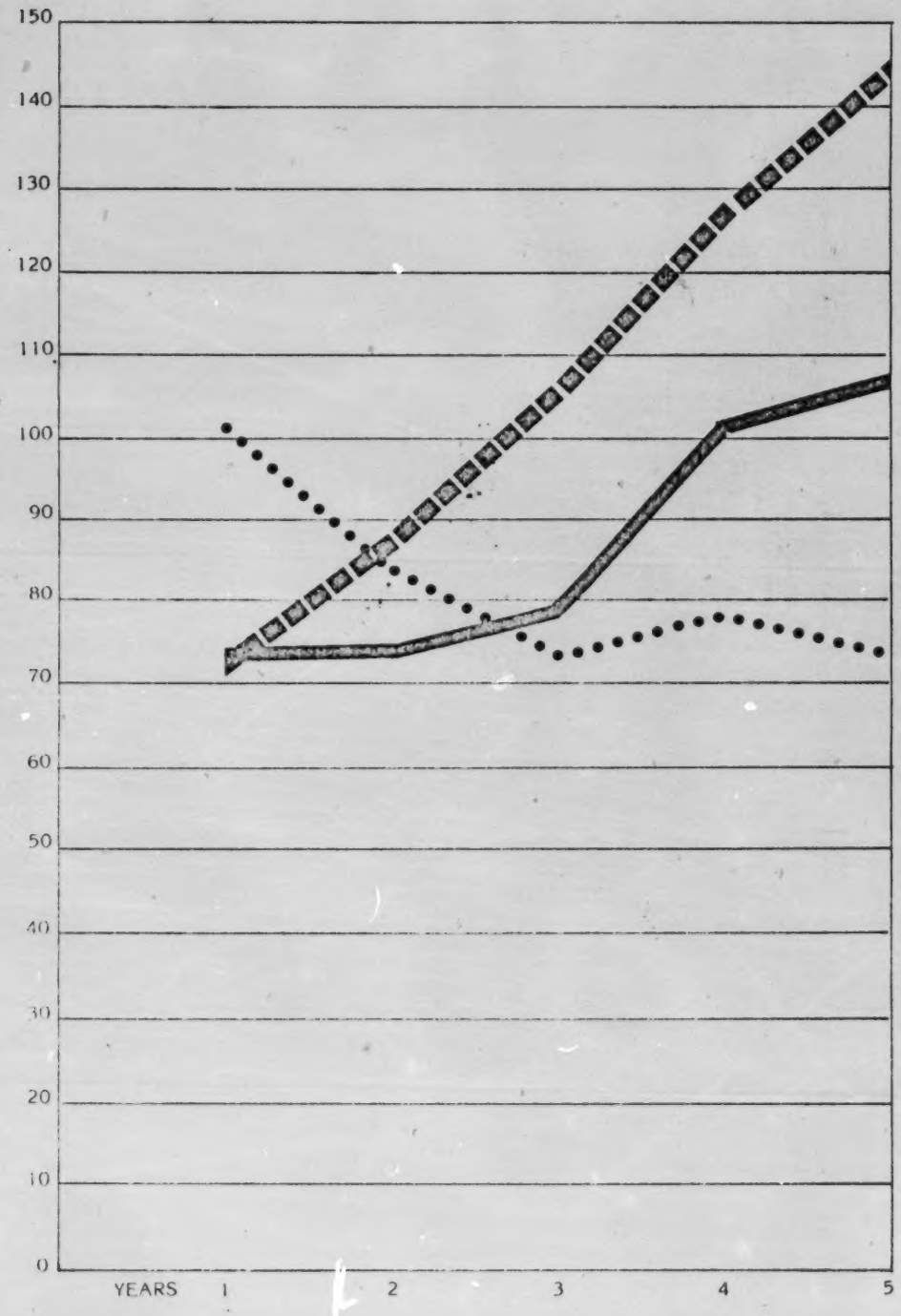
Local travel for job development	100 miles/week for 40 weeks @ 15.5¢/mi.	620
Travel allowance for recruitment	4 counselors @ $400 per year	1,600
Other Costs		
Publications & Public Information	4000 brochures @ .75	3,000
Direct Mail Campaign to Business, Industry, Guidance Counselors, Student Brochures	5000 brochures @ .07	350
40" Advertisements (run 3 times each)	A-town @ $250 each	750
	B-town @ $100 each	300
	C-town @ $150 each	450
Telephone (estimated)		1,800
Office Supplies		1,000
SUB-TOTAL COST		**$69,218**
Indirect Costs (Space, heat, light, etc.)		4,041
TOTAL COST		**$73,259**

PROJECTED FIVE-YEAR COOPERATIVE EDUCATION BUDGET

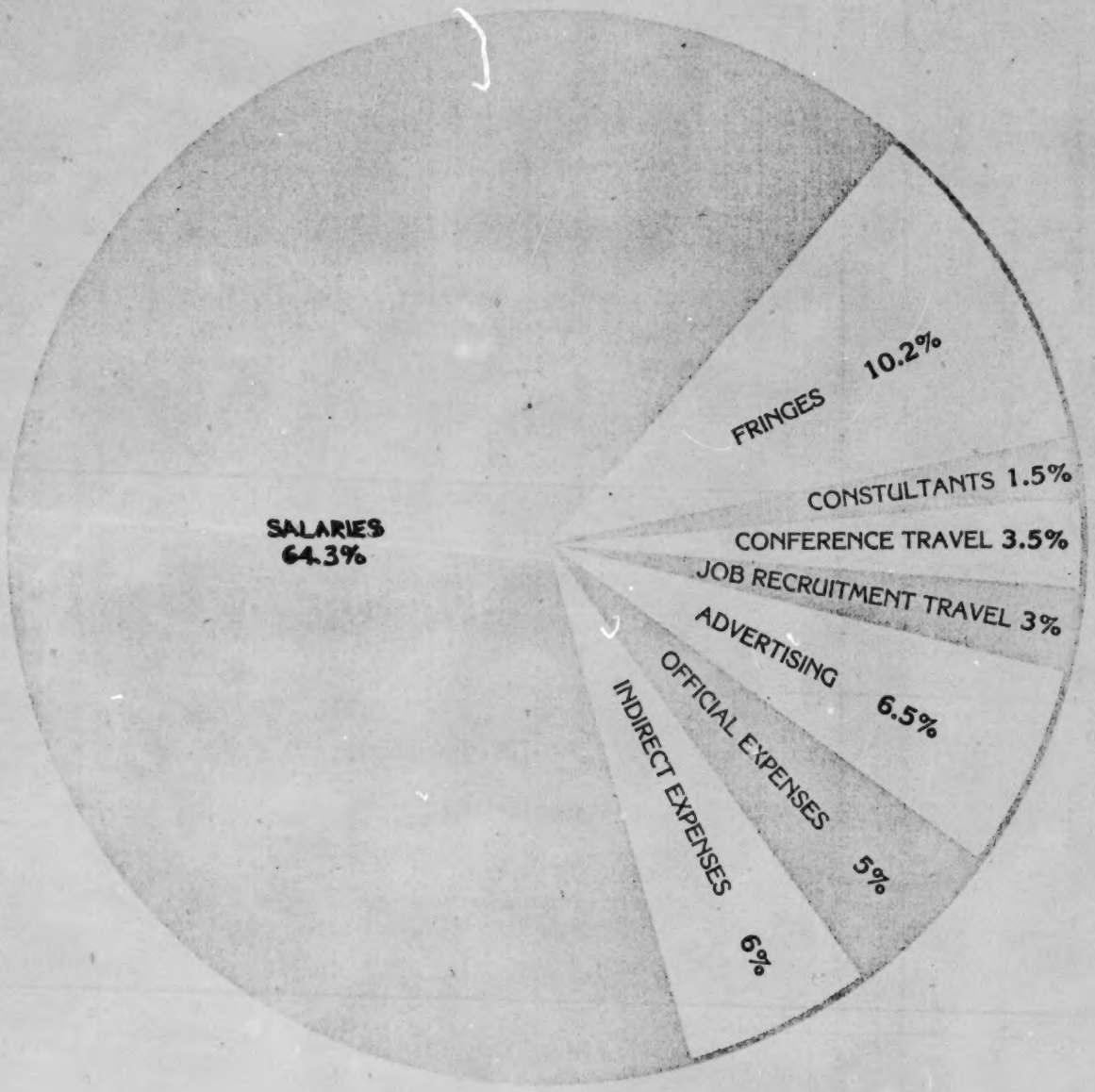
Salaries (Incl. fringe benefits	**1st year** $56,261	**2nd year** $58,577	**3rd year** $62,091	**4th year** $83,316	**5th year** $88,315
Travel (Staff, faculty & consultants)	5,307	4,000	4,240	4,494	3,035
Other					
Publicity	4,850	4,111	4,357	4,357	5,018
Telephone	1,800	1,850	1,961	2,078	2,202
Supplies	1,000	1,060	1,123	1,190	1,261
SUB-TOTAL	$69,218	$69,598	$73,772	$95,435	$99,831
Indirect Costs					
Space, heat, Light, etc.	4,041	4,243	4,455	4,901	5,146
TOTAL	$73,259	$73,841	$78,227	$100,336	$104,977
Staff	2.9	3.0	3.0	4.0	4.0
Students	72	88	106	128	144
$ Per Student	$1017	$839	$738	$784	$729

PROJECTED FIVE YEAR COOPERATIVE EDUCATION BUDGET*

*Annual Inflation Factor: 6%



TYPICAL IMPLEMENTATION EXPENSES FOR CO-OP



RESOURCE DEVELOPMENT: COOPERATIVE EDUCATION

The first step in resource development begins with an institution's mission. An institution must clearly know what its function is within a given community. Once the mission is clearly articulated and consensus reached, an institution's mission can be systematically coordinated with funding efforts in both the public and private sectors. G. T. Smith, the former Vice President of Development at The College of Wooster, has explained that,

> We should . . . first secure a committed consensus as to the institution's central mission, identify and study its primary constituencies, develop a clear plan for relating to each and, finally, set forth the staffing, budget, and other resource requirements.

It is senseless to pursue grantseeking simply to secure funding. Only when a project serves to strengthen and realize an institution's mission should a grant be sought.

Federal Funding

The comprehensive source for all federal programs is the **Catalog of Federal Domestic Assistance,** published by the Executive Office of the President, Office of Management and Budget. It can be procured from the Superintendent of Documents.

Cooperative Education is item 13.510 in the **Catalog,** and this classification should be used when seeking information about the federal program. The information contact person is

> Dr. John L. Chase, Chief
> Cooperative Education Branch
> Division of Training and Facilities
> Bureau of Postsecondary Education
> U.S. Office of Education
> Washington, D.C. 20202
>
> (202) 245-2146

Government funding is often a capricious means of financing and should not be relied upon solely. A March 7, 1978 memo from the Cooperative Education Division, American Society for Engineering Education, states:

> "President Carter's budget proposal presented to the Congress on January 23, 1978, requests that the current expenditure of $15 million for co-op in fiscal 1978 be reduced to $4 million in fiscal 1979, and to zero funding in fiscal 1980. No monies would be allocated to co-op after fiscal 1979 under the President's plan. The National Commission has launched an intensive lobbying effort to restore funding in fiscal 1979 to at least the present $15 million and hopefully to $25 million. The Commission was deeply involved in lobbying efforts at Senate committee hearings during the week of February 27th and will continue their efforts at similar meetings in the House later this month."

From page 792 of the May 1978 issue of **Engineering Education** comes this most significant notation:

> Recently, more and more people have expressed the opinion that federal funds for cooperative education have not been well spent, and that in far too many cases institutions have failed to develop programs that adequately use their own resources, with the result that the programs die when eligibility runs out and federal funding ceases. This tendency is now being countered by a more stringent policy from the U.S. Office of Education whereby grant applications showing a strong institutional commitment to cooperative education from the highest levels of the university administration have a better chance of being funded.

In addition to being uncertain, Federal funds are definitely temporary, and the institution must have a positive plan to support the Cooperative Education Program when the Federal funds terminate.

Because of the interest participants in the co-op program have in the college, they might well be considered as very real sources of financial assistance. Much care should be taken, however, to coordinate with other fund raising efforts in the institution to be sure the employers are not solicited haphazardly, too often, or without regard to proper priority.

Fees charged to students participating in the co-op program are a source of funds but will probably never support the program, especially in the beginning when the student numbers are few.

FTE, Full Time Equivalency generated by academic credit hours earned by co-op students, is another source of funding. While it will never be sufficient for total support of the program (for the same reason that student fees will not) every bit helps.

Two more ways remain to obtain cooperative education financing. If the college's commitment is firm enough and the co-op setup is centralized, the co-op program can be a regular item of the college budget. If the co-op is de-centralized, funds can be obtained from the budget of each department involved.

Private Sources of Funding

One can find out about available private sources of funding by utilizing the research facilities of one of the Foundation Center's regional collections. In Ohio the regional collection is located at the Cleveland Foundation. For further information, one can contact:

Ms. Jeanne Bohlen, Chief Librarian
The Kent H. Smith Library
Foundation Center — Cleveland
739 National City Bank Building
Cleveland, Ohio 44114
216-861-1933

Although the Cleveland Foundation Library is open to the public, one should make an appointment to use the microfiche. Ms. Bohlen will explain how to use the resources of the library, but again, one should make an appointment.

Acceptance of the cooperative education program by the college's administration will be shown by their attitude, space allotment, and budget, including both salaries and expenses. Once effective presentations have gained acceptance for co-op, support depends upon continuing communication.

Without faculty acceptance the co-op program cannot possibly survive. And it must be an acquired, not a directed, acceptance. The faculty should be encouraged to review cooperative employers' training plans, recommend qualified students, and go over students' evaluations from their training periods. Again, communications are vital. Since many faculty persons don't always read everything in their mailboxes, actual visits to the faculty by the co-op director may be best. Because of his position, the faculty member has the best vantage point from which to "sell" the program to students, to recommend programs, and to recognize the qualified students in his classes.

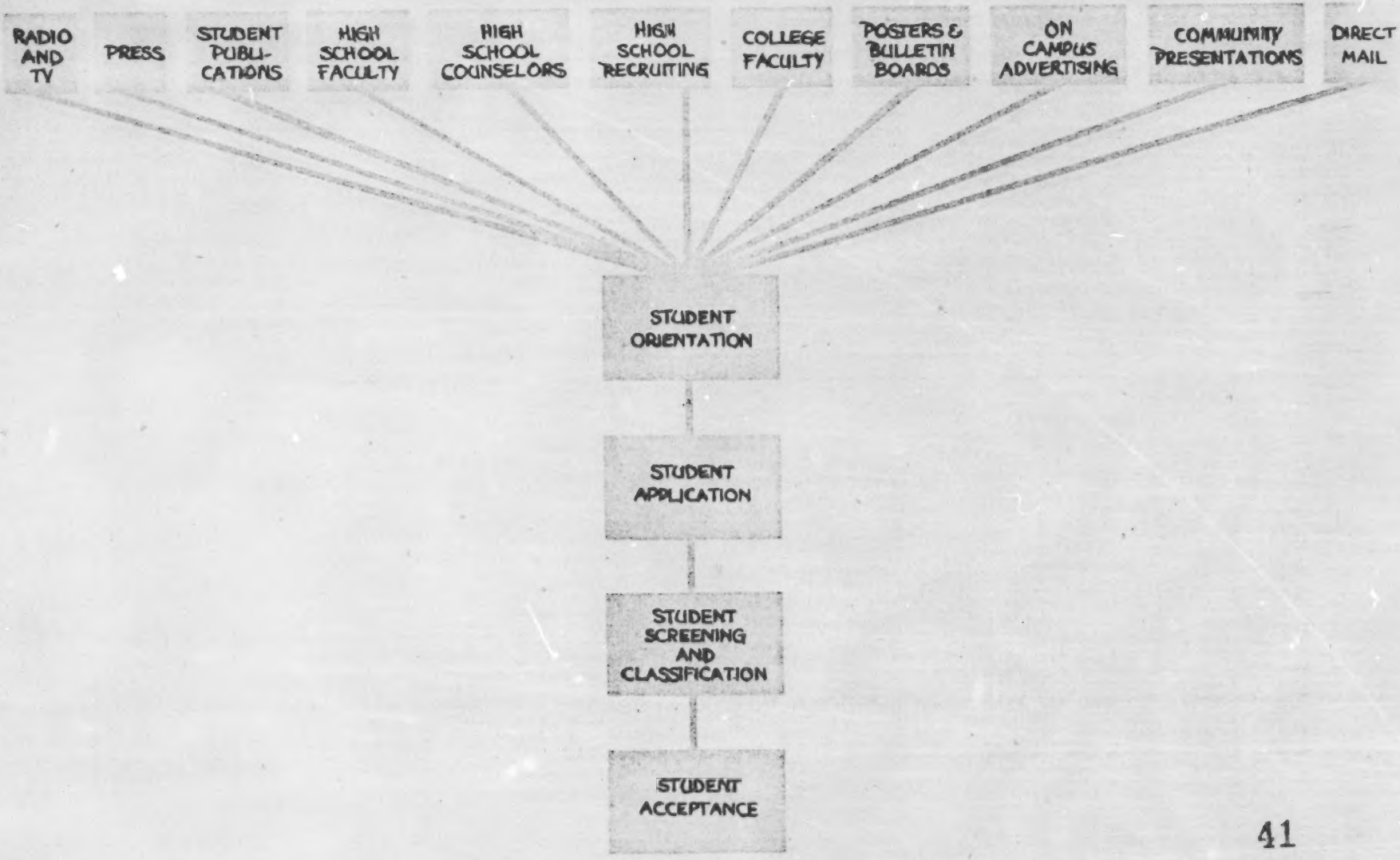
Any faculty members joining the co-op program should be kept constantly up to date on all phases of the program, including who the employers are. Packets of orientation material will help incoming personnel. Another pipeline of communications is developed by having a faculty committee made up of members of each college, department or technology. As the committee meets periodically to discuss co-op achievements and problems, it will simultaneously reveal the faculty attitude concerning co-op. Occasionally co-op students may be invited to these meetings to contribute their views and experiences and add another dimension. Some of these faculty members may also provide fine public relations by being taken along on visits to employers. A device some colleges may find useful in attuning to faculty opinion and attitude is a questionnaire requesting any information desired.

In gaining student acceptance of cooperative education, the personal, educational, and professional (rather than financial) benefits should be stressed. A student who feels that the program is for those in financial need will have little interest in it. Co-op has so many benefits for students that selling them on the concept should not be difficult. Initially, a questionnaire administered after an orientation presentation can help in learning their attitudes and opinions so that co-op can be presented effectively. Later, a regular newsletter can keep all parties, including employers, continually apprised of current developments in all aspects of co-op. Students should receive such information even during their campus absences.

Some of the most potent advertising that cooperative education can get comes from graduates of the co-op program. Students surveyed indicated that they support the co-op program 100%, would take co-op again, and would advise others to do so also. They also indicated specifically what aspects they valued highly: learning how to get along with people, getting both experiential and financial head starts on their professional careers, building contacts and references which helped them further their educations, and being satisfied with having earned part or all of their own educational expenses.

The most necessary partner in the program, the employer, whether in business, industry, or government, must be consistently although not necessarily frequently contacted by the co-op coordinator. Initially nearly all contacts must be with top management. After this top echelon has accepted the cooperative education concept and has passed its approval through the organization, subsequent contact may be made through the personnel department, which is usually in charge of new programs and training. Although approval by both management and personnel is vital, the supervisors under whom the student will work must also completely accept co-op. Missing any one of the three parties will usually result in loss of a potential co-op employer. If the college already has very good relationships with personnel departments of various companies, it might be well to make initial contact with these people. Sometimes their displeasure — and much future trouble — can be incurred by going over their heads.

CO-OP STUDENT RECRUITING



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Potential employers might be reassured to know that the AFL/CIO **endorses** cooperative education. At the request of the National Commission for Cooperative Education, the AFL/CIO, at its annual convention in late 1977, gave **unanimous endorsement** to a statement in support of cooperative education. In his address to the leaders and members of the labor union, Walter G. Davis, Education Director of the AFL/CIO, stated:

> The ultimate goal of this nation must be free tuition in the field of higher education if all are to be given an equal opportunity. While the struggle continues to achieve this goal, we support those alternatives which advance this principle. One such alternative is cooperative education. This program, now installed in over 1,000 colleges, is a joining together of classroom study and off-campus work. It provides that students earn equal pay for work performed by other workers. It offers the added advantage of useful career experience during the formal learning period. The amount of money earned by students is often sufficient to pay a great part of their tuition; and for the sons and daughters of union members, this can be a major factor in the decision to go forward in education.

Once an employer has become part of a co-op program, follow-up calls to provide updates on the status and progress of the program are absolutely necessary. Employers should know that the college is interested in their support and should be thanked for their supervision. In fact, good public relations and internal communications are as vital to the continued success of a co-op program as they are to its inception.

Internally, once the program has been accepted, a method for making co-op visible on campus should be developed. For example, the cooperative education program should be described in an appropriate place in the school's catalog or bulletin. A qualified co-op student working a few hours a week in the co-op office can often generate enough placement/co-op articles in school and local papers amply to justify wages. The admissions office may be willing to distribute brochures to high schools.

After the program is started, an extremely useful way of promoting cooperative education is periodically to have an all-day, on-campus co-op program. An employer panel, a student panel, and a faculty panel can be allotted time for presentations, and community leaders and the news media should be invited. The information exchange will be intrinsically valuable and will impart a sense of involvement to everyone present.

Whether to launch a new program or to keep one going successfully, talks before civic and other community groups are indispensable. The formula for a successful presentation is that it should have an attention-getting opener and a memorable close, and should keep them reasonably close together. The speaker, whether the co-op director, a coordinator, or any other well-briefed, knowledgeable college representative, may use illustrative slides, transparencies, tapes, or any other of the many training aids available. The presentation will be most effective if the professional co-op staff prepares it.

The results of cooperative education and placing students in their work assignments should be sent as news releases to the campus newspaper and all other appropriate media. Since the local media will vary widely in coverage, editorial philosophy, and knowledge of co-op, it is necessary for releases to emphasize the tasks that students perform and the experience they gain, rather than the pay they receive. All interested parties, but especially all three employer echelons — management, personnel, and supervision — should receive clippings. Radio and TV interviews discussing co-op are also effective if they can be arranged. In short, the importance of publicity and continuing communications relative to the cooperative education program cannot be overemphasized.

		Students				Faculty					Employers				Government Officials					Media Professionals		General Public		Other Co-op Professionals		
		Curr. Co-ops	Pot. Co-ops	Form. Co-ops	All Other Stu.	Governing Brd.	Admin. Staff	Deans	Dept. Chmn.	Teaching Fac.	Curr. Co-op Emp.	Pot. Co-op Emp.	Employer Organ.	Other Employers	Congressman	Legislators	Local Officials	Fed & State Exec. Br. Off.		Print Media	Broadcast Media	Surr. Comm.	Stwde Comm.	CEA/CED Members	Co-op Directors	Co-op Coord.
Printed	Letters	X	X	X	X		X	X	X		X	X		X	X	X	X	X	X						X	X
	Brochures		X			X	X	X	X	X	X	X		X	X		X								X	X
	Newsletters	X	X	X			X	X	X	X	X	X		X										X	X	X
	Magazines																									
Audio Visual	Slide Presentations		X								X	X	X									X				
	Films & Video Tapes		X		X							X		X												
	Presentational Notebook																									
	Exhibits	X	X		X		X	X	X	X	X	X		X									X	X	X	X
	Overhead Projections		X																							
	Bulletin Board	X	X	X	X		X	X	X	X																
"News" & Rel. Material	Newspapers	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X		X	X			
	Campus Publications	X	X		X		X	X	X	X	X	X								X		X				
	Employer Publications																									
	Professional Publications																							X	X	X
	Comm. Radio & TV	X	X	X	X		X	X	X	X	X	X	X	X							X	X	X			
	Public Radio & TV	X	X	X	X		X	X	X	X	X	X	X	X									X			
Personal/Spec. Events	Recognition Ceremonies	X		X			X	X	X	X	X															
	Receptions	X		X			X	X	X	X	X									X	X					
	Workshops																							X	X	X
	1) Students	X																								
	2) Faculty																									
	3) Staff																									
	4) Employer										X															
	Student Orientation	X	X																							

Reprinted from Southeastern Center Handbook for Cooperative Education, "Promoting Your Co-op Program; Identification of Markets and Messages" by James F. Vickery, Jr. and Glenda F. Lentz.

EMPLOYER EXPERIENCE WITH COOPERATIVE EDUCATION

Analysis of Costs And Benefits

Highlights of a research study under Title IV, Part D of the Higher Education Act of 1965, as amended.

Reprint from The Detroit Institute of Technology, Cooperative Education Research Center, Detroit, Michigan.

WHAT EMPLOYERS SAY ABOUT COOPERATIVE EDUCATION

A number of employers participating in this study offered written comments concerning their experience with Cooperative Education Programs. Here are a few of their comments . . .

Participating Companies
12345 Main Street
27 States, U.S.A.

Co-op Research Center
The Detroit Institute of Technology
Detroit, Michigan 48201

Dear Dr. Hayes:

- "CO-OP allows us to have a pool of trained and qualified persons available for employment at a given time."
- "An infusion of bright young people providing new ideas and viewpoints."
- "Expectations of business careers are more realistic in CO-OP students and therefore we get a more satisfied employee."
- "CO-OP allows us an opportunity to 'try out' candidates before making a commitment for full-time employment"
- "Their developing capability becomes a known factor and insures a good hire following graduation."
- "Student exposure to employer practices and organization, while at a formative level."
- "We find CO-OPs to be more mature. They make transition from college environment to work setting with ease."
- CO-OP graduates inevitably are more productive and knowledgeable . . ."
- "Besides their obvious experience, probably the most striking characteristics of CO-OP graduates are their maturity and their appreciation of what the business environment is really like. A combination of these three elements, along with a good academic background, puts the average CO-OP graduate a step or two ahead of the regular college graduate in both performance and potential."
- "Good employees. About 90% of CO-OP students have become permanent employees after receiving degree. Normally make outstanding performances."
- "We are satisfied with the results of our Cooperative Education Program. It has certainly helped us in our goal to identify and select the future managers of our business."

Sincerely

John Jones,
Personnel Manager

ABOUT THIS STUDY

Cooperative Education . . . often referred to as CO-OP . . . can be defined as . . .

> **A process of education which formally integrates a student's academic study with productive work experiences in cooperating employer organizations. Through the interaction of study and work experience, the student enhances his academic knowledge, his personal development, and his professional preparation. The teaching faculty, the guidance counselors, coordinators, and the employing supervisors share in the education process of the cooperative student.**

CO-OP at the college level dates back to the year 1906. Although CO-OP has existed for seventy years, and the number of college CO-OP programs has grown from less than 100 to about 1,000 during the past decade, a comprehensive national study containing hard data concerning **employer** experience with CO-OP has not heretofore been published. This study, funded by the U.S. Office of Education, examines in detail the experience of employers in terms of the costs and benefits involved in operating a CO-OP program.

A total of 70 employers, equal to approximately one-half of the private-sector employers who are members of the Cooperative Education Association, participated in the study. These Participating Employers, identified on the next page, are engaged in a variety of business lines. They are located in 27 states and the District of Columbia, thereby giving the study a national rather than a regional scope.

Nine of the Participating Employers supplied detailed and in-depth data concerning their experience with several hundred individual CO-OP employees and recent college graduates during the period from July 1, 1964 to June 30, 1974. The 61 remaining employers supplied more general but valuable information concerning their CO-OP experience.

The principal cost and benefit items examined in this study include . . .

- Recruitment Yields
- Equal Employment Opportunities
- Employee Work Performance
- Employee Retention
- Salary and Promotional Progression
- Recruitment Costs
- Labor Costs

This report contains the highlights of the research findings concerning each of these cost and benefit areas.

The authors of this report hope that it will be helpful to employers and institutions of higher education now participating in cooperative education, and that it will introduce CO-OP to new employers interested in viable approaches to human resource development.

PARTICIPATING EMPLOYERS

The 70 employers that supplied information for the research study are listed below . . .

Allen-Bradley Company
Alton Box Board Company
American Cyanamid Company
ARINC Research Corporation
Atlantic Richfield Corporation

Babcock & Wilcox
Baptist Hospital of Florida
Bechtel Corporation
Boeing Company
Burroughs Corporation

Carolina Power & Light Company
Carrier Corporation
Caterpillar Tractor Company
C-E Lummus Company
Cincinnati Milacron, Inc.

Combustion Engineering, Inc.
Continental Can Company
Cummins Engine Company
Deere & Company
Detroit Diesel Allison Div., GMC

Detroit Edison Company
Diamond Shamrock, Inc.
A. B. Dick Company
Ernst & Ernst
Exxon Company, U.S.A.

Florida Power & Light Company
Ford Motor Company
Gates Rubber Company
General Dynamics Corporation
General Electric Company

Gilbert Associates, Inc.
Goodyear Atomic Corporation
Goodyear Tire & Rubber Co.
Granite City Steel
Harrah's

Hewlett Packard
ICI United States, Inc.
Illinois Bell Telephone Company
Kansas City Power & Light Company
Kellogg Company

Lloyds Bank, California
Lockheed Missiles & Space Co.
Louisville & Nashville Railroad
3M Company
Mack Trucks, Inc.

Meaden & Moore, CPA
Missouri Pacific Railroad Co.
Mobil Oil Corporation
Monsanto Corporation
Monsanto Textiles Company

OSCO Drug Company
Phillips Petroleum Company
Pontiac Motor Division of GMC
Public Service Indiana
Reynolds Metals Company

Robins Engineering, Inc.
St. Joe Minerals Corporation
Sanders Associates, Inc.
Scott Paper Company
Sherwin Williams Company

South Central Bell Tel. & Tel Co.
Southern Railway System
Southwestern Bell Telephone Co.
Sperry-New Holland
Sperry Univac

Vapor Corporation
West Bend Electric
Western Electric Company
Westinghouse Electric Corporation
Whitman, Requardt & Associates

Nine of these employers supplied in-depth data concerning individual CO-OP students, CO-OP graduates, and other recent college students during the ten-year period ended June 30, 1974.

Following is information concerning the extent of CO-OP program experience of the 70 Participating Employers included in this study . . .

Their CO-OP program experience ranged from one to 69 years — with a median average of nine years. Here are the time periods when their CO-OP programs began...

LENGTH OF CO-OP EXPERIENCE

10%	19%	44%	27%
1906-1939	1940-1959	1960-1969	1970-1975

They hired a total of 26,035 students since inception of their CO-OP programs — with a median of 50 students. Here is a distribution of employers by number of CO-OP students hired . . .

TOTAL NUMBER OF CO-OP STUDENTS HIRED

32%	17%	14%	14%	13%	10%
Less Than 25	25-49	50-99	100-199	200-399	400 or More

On June 30, 1974, they employed a total of 2,116 students — with a median of 11 students. Following is a distribution of employers by number of CO-OP students in employment on June 30, 1974.

NUMBER OF CO-OP STUDENTS EMPLOYED ON JUNE 30, 1974

42%	21%	9%	5%	5%	9%	9%
Less Than 10	10-19	20-29	30-39	40-49	50-99	100 or More

On June 30, 1974, the median number of colleges supplying employers with CO-OP students was five. Following is a distribution of employers by number of colleges supplying CO-OP students . . .

NUMBER OF COLLEGES SUPPLYING CO-OP STUDENTS

49%	28%	10%	13%
Less Than 5	5 - 9	10 - 14	15 or More

EMPLOYEES IN THIS STUDY

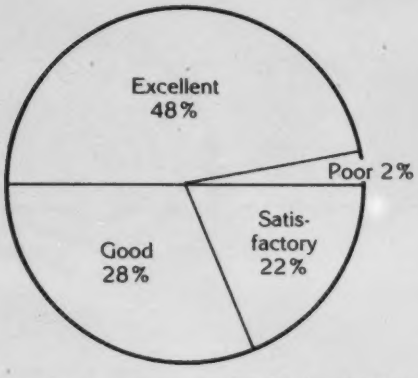
The nine Case Study Employers supplied data concerning 738 employees hired during the ten-year period ended June 30, 1974. Here is a brief summary of some of their main demographic and educational characteristics . . .

	CO-OP Students (217)	CO-OP Graduates (114)	Other Graduates (407)
Male	94%	98%	92%
Married	8	35	52
Degree Program			
Associate	14%	17%	6%
Baccalaureate	86	80	84
Master	-	3	10
Academic Major:			
Engineering	73%	83%	46%
Business	20	12	29
Liberal Arts	6	3	15
Natural Science	1	2	10
College Grade Point Average (Mean)	2.92	3.04	2.88

This random sample represents two-thirds of the 1,103 total number of CO-OP students, CO-OP graduates, and other recent college graduates hired.

RECRUITMENT YIELDS

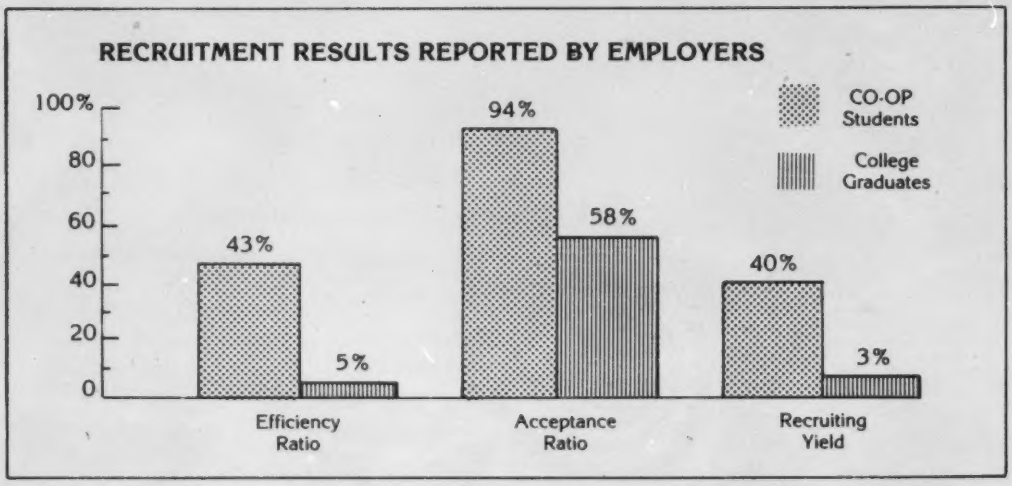
Employers often exert substantial efforts to identify and hire a qualified employee. They are therefore interested in the highest possible yields on their recruitment expenditures. Here is a brief summary of CO-OP recruitment experience reported by employers during the year ended June 30, 1974 . . .



CO-OP Report Card

- 98% reported their general experience was SATISFACTORY or better . . . and 76% said it was either EXCELLENT or GOOD.
- Based on a scale of 4.00 for EXCELLENT, the average rating was 3.23.

Recruitment results for CO-OP students were much better than for recent college grads . . .



- **Efficiency Ratio** is the number of job offers made, as a percent of the number of candidates interviewed. It was almost **nine times** higher for CO-OP (43%) than for recent college graduates (5%).
- **Acceptance Ratio** is the number of offers accepted, as a percent of the number of offers made. It was almost **twice** as high for CO-OP (94%) as for recent college graduates (58%).
- **Recruiting Yield** is the number of job offers accepted, as a percent of the number of candidates interviewed. It was more than **thirteen times** higher for CO-OP (40%) than for recent college graduates (3%).

One reason why recruitment results for CO-OP students were much better than for college graduates is that college CO-OP coordinators rendered screening and referral services, as evidenced by the fact that employers with the best recruitment results seldom interviewed CO-OP candidates on a college campus.

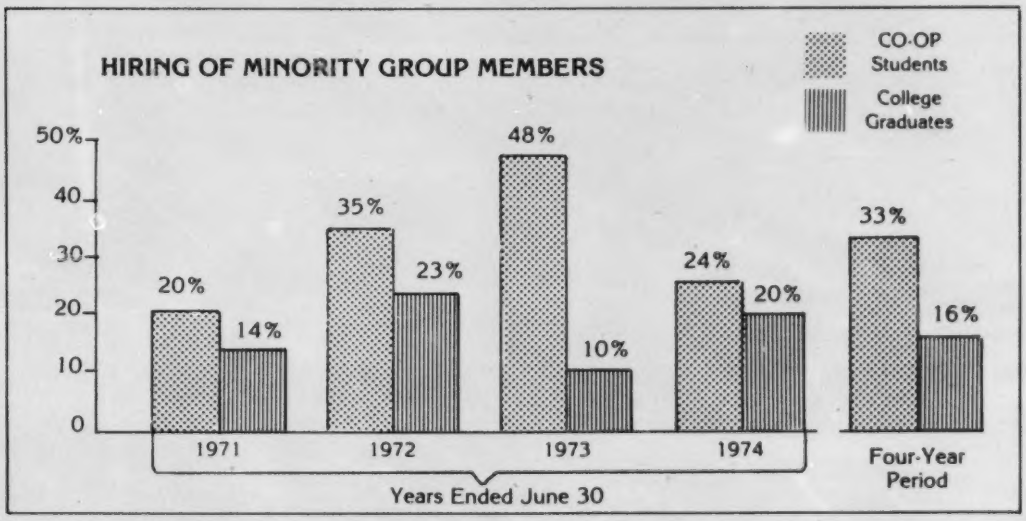
EQUAL EMPLOYMENT OPPORTUNITIES

CO-OP programs have assisted employers in attaining Equal Employment Opportunity (EEO) objectives, although there have been variations in experience. They described their CO-OP experience with EEO goals as follows . . .

CO-OP Report Card

- **80%** of employers reported SATISFACTORY or better experience . . . and **50%** reported it was either EXCELLENT or GOOD.
- Based on a scale of 4.00 for EXCELLENT the average rating was **2.48**.

During the four-year period ended on June 30, 1974, relatively more minority group members were hired as CO-OP employees than as recent college graduates. Minority groups are defined as Black, Indian, Mexican or Oriental Americans.



In addition, the percentage of **women** among CO-OP hires increased from **5% to 23%** during this period . . . compared to an increase from **9% to 20%** among recent college graduate hires.

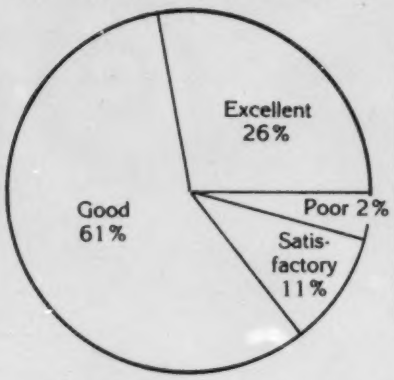
Here are some of the employer comments concerning CO-OP and EEO goals:

- "Cooperative education has proved to be the most ideal way to train, retain and develop minority students."
- "The availability of minorities and females as candidates for the CO-OP program has been greater than for college recruiting."

On June 30, 1974, at the end of the period, **28%** of CO-OP students were minority group members . . . compared to **3%** of college graduate employees. In each group, 14% were women.

EMPLOYEE WORK PERFORMANCE

Employers obviously want to develop human resource programs which result in productive employee performances. Here is a brief summary of CO-OP work performance experience reported by employers . . .

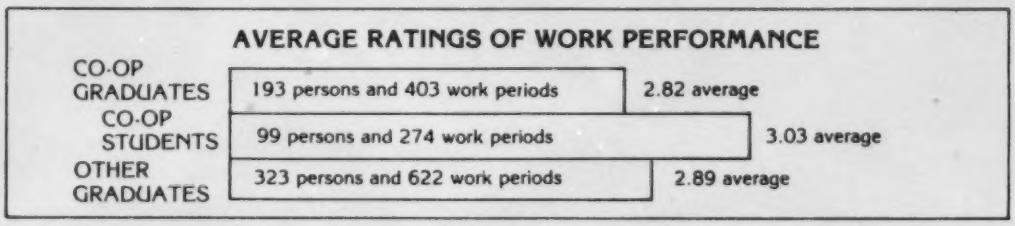


CO-OP Report Card

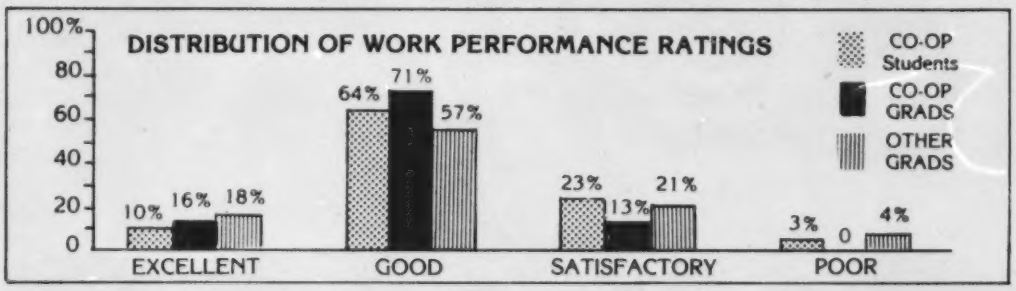
- **98%** reported their general experience was SATISFACTORY or better . . . and **87%** said it was EXCELLENT or GOOD.
- Based on a scale of 4.00 for EXCELLENT, the average rating was **3.11.**

Employers usually review and evaluate work performances at regular intervals. CO-OP students receive written evaluations at least once during each work period. College graduates usually receive written evaluations each year.

CO-OP student work performance ratings were found to be directly related to college grade point average, statistically significant at the .05 level. CO-OP **students** received good ratings for their work, and CO-OP **graduates** received even higher ratings. Following are mean average work performance evaluations of each of these three groups . . . from an analysis of 1,299 work periods of 615 employees during the ten years ended June 30, 1974. Ratings are based on a 4.00 scale (one point for a rating of "poor", up to four points for "excellent") . . .



Here is a distribution of average work performance ratings of each group . . .

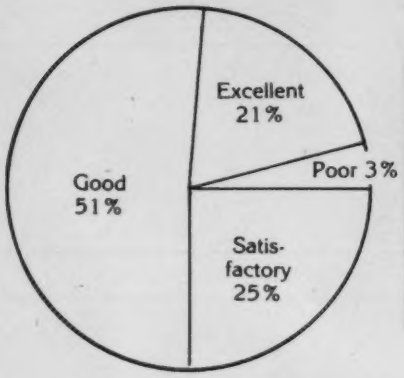


Moreover, average work performance ratings for CO-OP students and CO-OP graduates increased steadily with the passage of time . . .

CO-OP Student Work Periods			CO-OP Graduate Work Periods		
First	Second	Final	First	Second	Final
2.77	2.84	2.90	2.94	2.98	3.22

EMPLOYEE RETENTION

A stable and experienced work force characterized by high retention (low turnover) rates generally results in lower costs of recruiting and training new employees. Retention experience with CO-OP employees was reported as . . .



CO-OP Report Card

- **97%** reported their experience was SATISFACTORY or better . . . and **72%** said it was either EXCELLENT or GOOD.
- Based on a scale of 4.00 for EXCELLENT the averate rating was **2.90.**

Employers reported that the employment of about one-half of CO-OP students terminated **before** college graduation, primarily due to resignation for personal reasons (such as dropping out of college) rather than to job-related reasons, and the average length of time worked was less than one year. Length of time worked was found to be inversely related to distance between college and work sites, statistically significant at the 05 level.

Retention experience with CO-OP students upon graduation was much better . . .

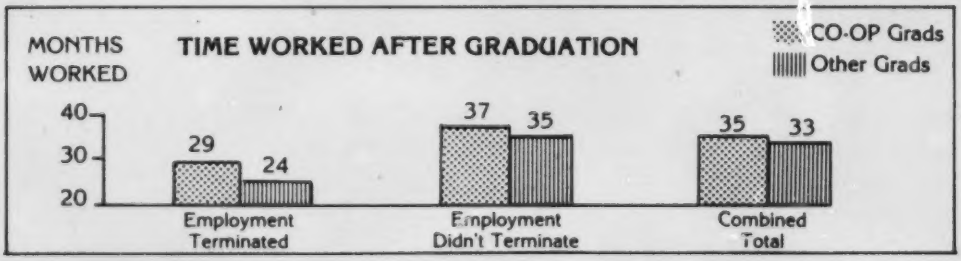
CO-OP RETENTION AT COLLEGE GRADUATION

REGULAR JOB OFFERS	62% of CO-OP grads got offers
ACCEPTANCE OF OFFERS	79% of the job offers were accepted

Employer retention experience with CO-OP employees in the years **after** college graduation was more favorable than experience with other recent college graduates in terms of termination rates as well as the mean average length of time worked, during the ten-year period ended June 30, 1974 . . .

TERMINATIONS AFTER GRADUATION

CO-OP GRADUATES	• Terminations	18%
	• Resignations	13%
OTHER GRADUATES	• Terminations	22%
	• Resignations	17%



SALARY AND PROMOTIONAL PROGRESSION

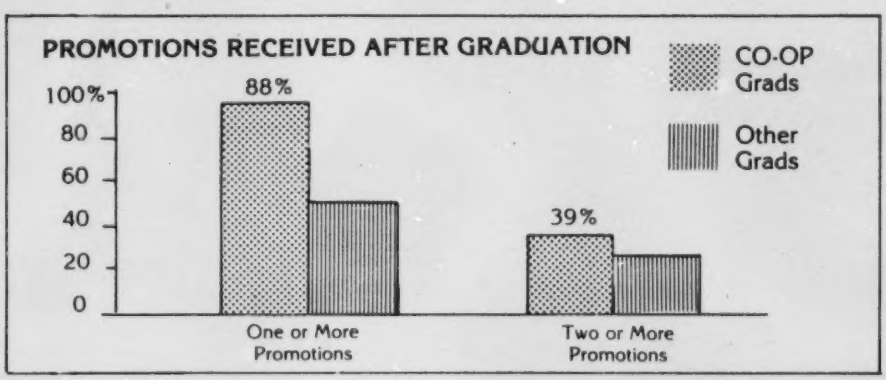
Employers reported their primary CO-OP objective was to develop future professional and managerial talent. Here is their report on salary and promotional progression of CO-OP graduates . . .

CO-OP Report Card

- **100%** reported their experience was SATISFACTORY or better . . . and **85%** said it was either EXCELLENT or GOOD.
- Based on a scale of 4.00 for EXCELLENT, the average rating was 3.15.

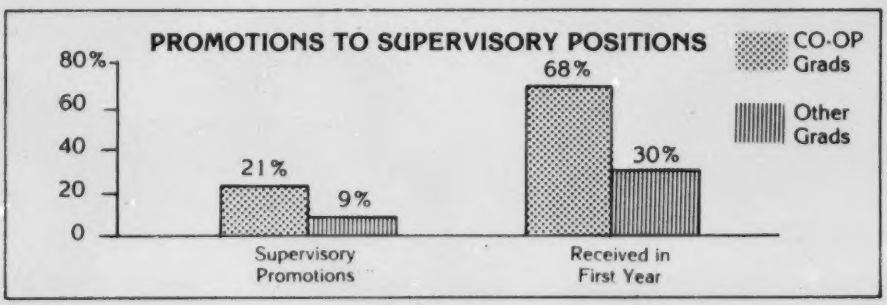
Of the CO-OP graduates, **94%** received at least one **merit increase** in salary — compared to **67%** of other college graduates. On average, CO-OP grads received 1.1 merit increases and other college grads received 1.0 merit increase per year worked.

CO-OP grads also received more **promotions** than did other college grads . . .



On average, CO-OP grads received a promotion once every **two** years worked — compared to once every **three** years worked by other grads.

CO-OP graduates also received more promotions to **supervisory** levels than did other college grads, and the CO-OP grads received them sooner . . .



Thus, in terms of promotions and merit increases in salary, CO-OP graduates moved faster and further than did other recent college graduates.

RECRUITMENT COSTS

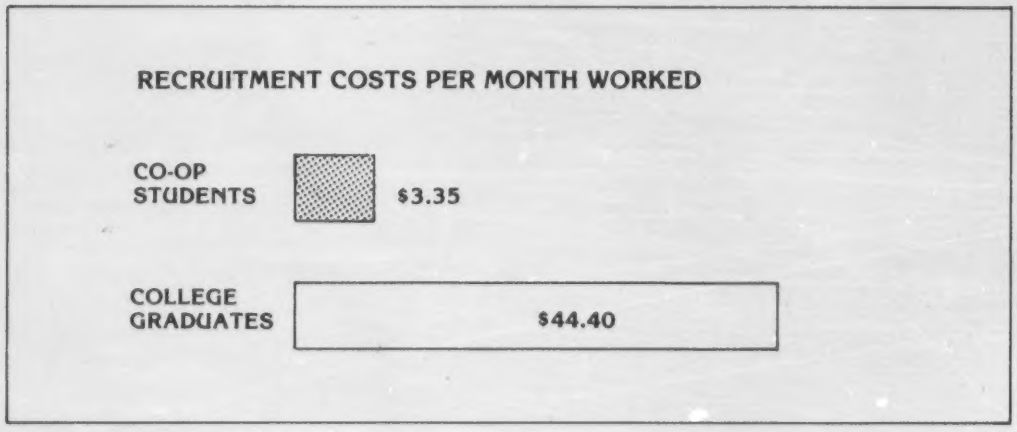
Employers were asked to calculate the average cost to recruit a new CO-OP student employee, as compared to the cost of recruiting a new college graduate employee. Each employer reported the specific ingredients included in its calculation of recruitment costs, and these ingredients were comparable for each of the two types of employees.

Here is a brief summary of employer experience during the year ended June 30, 1974 . . .

- **None** of the employers reported higher recruitment costs for a CO-OP student than for a recent college graduate.
- Among individual employers, the recruitment cost per CO-OP student ranged from **5%** to **70%** of the cost per recent college graduate.
- The median average recruitment cost per CO-OP student was **$50** — compared to **$800** per recent college graduate.

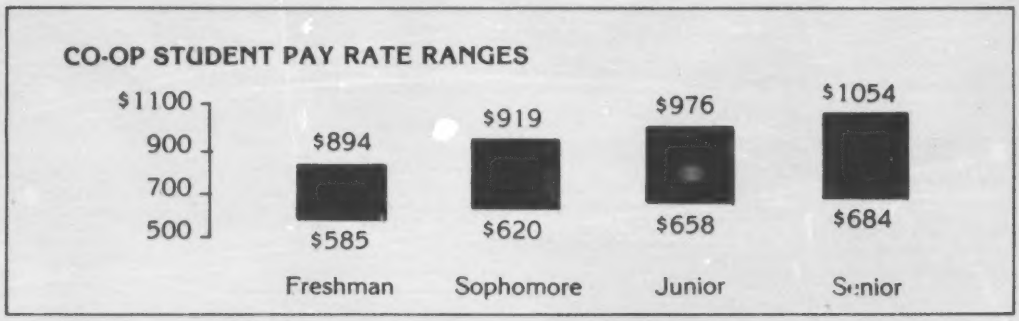
Employers that reported the **lowest costs** ($24 to $50) to recruit a CO-OP student also spent from $200 to $1,000 to recruit a college graduate. They recruited most of the college grads by means of on-campus interview schedules, but they recruited **very few** CO-OP employees in this manner — perhaps because college CO-OP coordinators rendered screening and referral services to them — thereby reducing staff salary and travel expenses involved in the recruitment of CO-OP students.

The cost of recruiting an individual employee is a nonrecurring or one-time cost . . . but it can be viewed as a monthly cost based on the length of time the employee works for the employer. Here is a comparison of median average recruitment costs of **319** CO-OP students and **400** recent college graduates — in each case divided by the median average number of months worked . . .



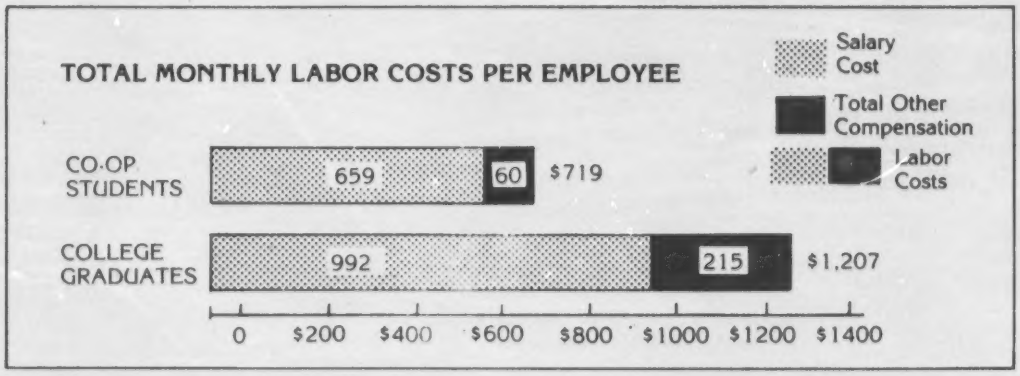
LABOR COSTS

Employers usually base CO-OP pay schedules on years of college completed, often with higher pay rates for CO-OP students in engineering or other technical fields. Pay rates vary widely among employers. Ranges in monthly rates for CO-OP students in technical classifications on June 30, 1974, at each class level, were . . .



Average monthly salaries **paid** during the year ended June 30, 1974, ranged from $614 to $920 for CO-OP students and from $809 to $1,095 for recent college graduates. Among individual employers, salary differentials ranged from **3% to 42% less** for CO-OP students. The average salary differential between the two groups was 26%.

CO-OP students also received substantially fewer employee benefits than recent college graduates . . . particularly tuition aid, life and hospital-medical insurance, and retirement programs. Fewer employee benefits — combined with lower salaries — resulted in **lower total labor costs** for CO-OP students than for recent college graduates . . .



The preceding chart reveals that, based on arithmetic means, monthly labor costs for CO-OP students ($719) averaged **40% less** than labor costs for recent college graduates ($1,207).

When CO-OP students were graduated from college, their **starting** salaries were in almost all cases higher than the starting salaries received by other recent college graduates. The average differential in starting salary was **9% more** for CO-OP graduates.

SUPPLEMENTAL COSTS AND BENEFITS

In addition to data concerning the principal costs and benefits examined in this study, employers were asked to supply information concerning other aspects of their CO-OP programs.

The following items, although difficult to measure in quantitative terms, were cited by a number of employers as resulting indirectly in costs or benefits . . .

- **Flexibility in Assigning Work**
  Employers reported that CO-OP students were more willing to undertake routine but essential work assignments than were recent college graduates, thereby broadening their experience and knowledge of basic operations within the organization and preparing them for future supervisory or managerial positions.
- **Effect on Time of Regular Staff Members**
  Many of the employers reported that the availability of CO-OP students tended to enable supervisory and other regular staff members to devote more time to duties commensurate with their talents, whereas some employers reported that CO-OP students tended to tie up the time of their supervisors. The former group of employers often assigned CO-OP students to regular jobs in the mainstream of work activities, whereas the latter group often assigned CO-OP students to special short-term projects.
- **CO-OP Students as "Goodwill Ambassadors"**
  Several employers reported that CO-OP programs enhanced their relationships with colleges and increased their access to prospective candidates for employment, because CO-OP students were "goodwill ambassadors" when they returned to the college campus.
- **Problems Involving Continuity and Scheduling of Work**
  Employers cited problems involving the continuity of CO-OP student employment, including gaps and overlaps in the scheduling of work periods of CO-OP students enrolled in colleges with different lengths of academic terms.

There are, in addition, the costs of staff salaries and expenses involved in administration of a CO-OP program. These costs depend on several factors including size of the CO-OP program as well as the extent to which staff members have other responsibilities.

The nine Case Study Employers that supplied detailed information for this study reported wide variations in CO-OP staff size, ranging from more than five full-time persons to a small fraction of one person's time. One employer employed the equivalent of one full-time staff member for each 13 CO-OP students, whereas another employer had a full-time staff member for each 120 CO-OP students. The median average was equal to one administrative staff member per 60 CO-OP students.

SUMMARY

Recruitment Yields

Recruitment yield in terms of persons hired, as a percent of candidates interviewed, was 13 times higher for CO-OP students (40%) than for recent college grads (3%).

Work Performance

Employer ratings of work performance, based on a scale of 4.00 for excellent, averaged 2.82 for CO-OP students, 3.03 for CO-OP graduates, and 2.89 for other recent college graduates in the ten-year period ended June 30, 1974.

Salary & Promotion Progression

CO-OP grads received merit raises in salary more frequently than other college grads. CO-OP grads received an average of one promotion every two years — compared to once every three years for other college grads. CO-OP grads received more promotions to supervisory positions, and they received them sooner than other college grads.

Recruitment Costs

Recruitment costs averaged much less for CO-OP students ($50) than for recent college graduates ($800). Among individual employers, recruitment cost per CO-OP student ranged from 5% to 70% of the cost of recruiting a recent college graduate. None of the employers reported higher recruitment costs for CO-OP.

EEO Objectives

The percentage of minority group members hired was twice as high among CO-OP students (33%) as among recent college graduates (16%), for the four-year period ended June 30, 1974.

Employee Retention

The employment of half of the CO-OP students terminated before college graduation, but 62% of CO-OP grads received regular job offers and 79% of offers were accepted. After graduation, the termination rate of CO-OP grads (18%) was less than among other college grads (22%).

Supplemental Costs and Benefits

Employers reported: more flexibility in assigning work to CO-OP students than to college graduates; differing experience concerning the effect of CO-OP students on the time of other staff members; better relationships with colleges; difficulties in scheduling work periods; and variations in administrative costs.

Labor Costs

CO-OP students received lower salaries and fewer employee benefits than recent college grads. Total labor costs average 40% less for CO-OP students than for recent college grads. Starting salaries of CO-OP grads were 9% higher than for other college grads.

In conclusion, the results of this study suggest that CO-OP is an effective method of improving recruitment yields — including identification and hiring of minority group members prior to their college graduation — while also lowering recruitment costs, labor costs, and turnover rates among employees. Moreover, CO-OP graduates have an advantage over recent college grads in terms of productive work performances . . . thereby assisting in management development to meet future needs for supervisory and managerial talent.

SURVEYS

It is absolutely essential that the feasibility study and/or implementation of co-op start from a known base, which includes the attitudes of all personnel who will be involved. The most practical means of determining this is to make institutional, faculty, student, and employer surveys. A well designed, well executed, well evaluated survey plays a vital role in planning and implementing any action. And all surveys should be brief, because long, complex surveys usually evoke few replies. Answers to all questions simply cannot be gained with one questionnaire.

When evaluating surveys, be careful not to let a highly favorable response obscure other factors which warrant serious consideration. Many times even a well conducted survey will indicate overwhelming support for a project, but when it comes to implementation, support will be only minimal. At best, surveys simply provide data; they do not make decisions for the investigators. They are, however, extremely useful in selling ideas to concerned parties.

Four sources of information need to be explored:

Institutional Survey. The co-op feasibility study must investigate established programs in other institutions. The survey is a valuable supplement, since the director cannot possibly visit all co-op institutions to gain information. Administration of the institution considering a program must also be surveyed.

Faculty Survey. Since faculty support is essential to the success of a cooperative education program, it is imperative to learn what they favor, what they criticize, whether they will recommend co-op to their students, etc. Not requiring signatures on the questionnaires may elicit more forthright information.

Student Survey. As many of the student body as possible should answer the questionnaire, and they must have a complete explanation of the survey's aims. A short, simple questionnaire with easily understood items will yield valid data on student opinion.

Employer Survey. It is vital to determine how much interest potential employers have in co-op. This part of the survey simultaneously informs employers of plans for a co-op program and gathers data on their interest. However, a positive response on a survey does not always predict the amount of participation in the program.

The sample questionnaires which follow give suggestions about the kinds of information that might be requested through surveys.

COOPERATIVE EDUCATION

Faculty Questionnaire

Cooperative Education is a college-level program which combines outside job experience in the student's chosen field with in-class academic work.

NAME (optional)

DEPARTMENT

1. My knowledge of Cooperative Education is:
   ____ Extensive ____ Moderate ____ Limited ____ Non-existent
2. I would like to learn more about Cooperative Education.
   ____ Yes ____ No
3. I believe students in my area could benefit from participation in Cooperative Education.
   ____ Very much ____ Somewhat ____ Very little ____ Not at all
4. I (would/would not) support a Cooperative Education program.
5. I would be willing to
   ____ Recommend it to my students.
   ____ Recommend it to employers with whom I am familiar.
   ____ Serve on an advisory committee.
   ____ Serve on a planning committee.
   ____ If given release time, would serve as a co-op coordinator.

COMMENTS:

The following information might be presented to student groups before their filling out questionnaires. The clearer their understanding of cooperative education, the more intelligently they can complete the questionnaires.

Definition of Cooperative Education

History and Growth

Benefits

Proverb: "I hear and I forget; I see and I remember; I do and I understand."

Proverb: "Give me a fish and I will eat for today. Teach me to fish and I will eat for the rest of my life."

Co-op makes classroom work more meaningful.
- Aids in career evaluation and exploration
- Provides a counseling service
- Often satisfies experience requirement in obtaining a job
- Can mean possible higher starting wage
- Gives opportunity to use equipment not available at college
- Provides information not available even in libraries
- Helps student gain self-confidence and more positive self-image
- May solve summer job problem
- Helps student financially

Company observation and evaluation:
- 70% to 90% of all co-op students join their co-op companies.
- High retention rate: 83% for co-op vs. 55% for non-co-op at Union Carbide.
- Faster progression: 6 year co-op man = 9 year non-co-op man at Lockheed Aircraft.
- Co-op time often included in seniority and reckoning of fringe benefits.

Disadvantage:
- Will probably extend school to seven quarters for an associate degree.

INFORMATION FOR STUDENT QUESTIONNAIRE

What is COOPERATIVE EDUCATION? Cooperative Education is a college-level program which combines outside job experience in the student's chosen field with in-class academic work.

What advantages does COOPERATIVE EDUCATION offer the student?

1. It helps college studies make more sense.
2. It helps in determining career choices.
3. It creates an opportunity for the student to make money.
4. It promotes student confidence, poise, maturing, seriousness, and success orientation.

How can I fit COOPERATIVE EDUCATION into my college schedule? Here are some ways:

The Alternating Plan is so named because students alternate quarters of job experience in the students' chosen fields.

Alternating Plan A: First year everyone attends classes all three quarters. Second year, **starting with the summer** quarter, half the students (Group A) start co-oping and the other half (Group B) attend classes. During the fall, winter, and spring quarters of the second year these two groups alternate quarters of classroom work with quarters of co-op experiences. Both groups graduate at the end of the **spring** quarter of the second year. Here is a layout of Alternating Plan A:

1st Year F W Sp	2nd Year Su	F	W	Sp
Everyone In Class	Gr. A Co-op	Class	Co-op	Class
	Gr. B Class	Co-op	Class	Co-op

Alternating Plan B: First year everyone attends classes all three quarters. Everyone then has a vacation during the summer quarter. Second year, **starting with the fall quarter,** half the students (Group A) start co-oping and the other half (Group B) attend classes. During the winter, spring, and summer quarters of the second year, these two groups alternate quarters of classroom work with quarters of co-op experience. Both groups graduate at the end of the **summer** quarter of the second year. Here is a layout of Alternating Plan B.

1st Year F W Sp	Su	2nd Year F	W	Sp	Su
Everyone In Class	V a c t.	Gr. A Co-op	Class	Co-op	Class
		Gr. B Class	Co-op	Class	Co-op

In the Parallel Plan, students attend college full-time during their first year. Summer quarter is vacation time. During the second year, students attend college part of each day, taking a somewhat lighter than average class load, and spend part of each day working at a career-related job. This will add one quarter to the regular two years college course, but the wage earning is continuous. Another type of Parallel Plan is used in some places where the student attends school three days a week and works on a co-op job three days a week.

In the Extended Day Plan, students attend college full-time during their first year. Summer quarter is vacation time. During the second year, students attend college full-time every quarter, taking a full academic load, and spend after school hours working on a career-related job. This allows graduation on time at the end of the spring quarter, but the work load is heavier.

COOPERATIVE EDUCATION

Student Questionnaire

NAME _____ DATE _____

ADDRESS _____ HIGH SCHOOL _____

_____

Please check the following:

- ☐ I did not co-op in high school.
- ☐ I did co-op in high school.
  - Co-op Employer _____
  - Address. _____
  - Nature of Job _____
  - Length of Time _____
- ☐ I am not working now.
- ☐ I am working now.
  - Employer's Name _____
  - Employer's Address _____
  - Nature of Job _____
  - Hours per day _____ per week _____
- ☐ I am now enrolled in the _____ technology program.
- ☐ After having the COOPERATIVE EDUCATION Program explained to me, I have decided I would like to co-op.
- ☐ I prefer Alternate Plan A which provides for seven continuous quarters and permits graduation at the end of the spring quarter of the second year.
- ☐ I prefer Alternate Plan B which provides for a vacation in the summer quarter between the first and second years, but delays graduation until the end of the summer quarter of the second year.
- ☐ I prefer the Parallel Plan if it can be worked into my schedule.
- ☐ I am not interested in the COOPERATIVE EDUCATION Plan.

COOPERATIVE EDUCATION

Employer Survey

Note: Cooperative Education is a college level program which combines outside job experience (hopefully in the student's chosen field) with in-class academic work. It is completely and always voluntary and does not involve any binding contracts, so no employer is ever committed for any given length of time.

Name of Firm: _____

Address: _____

Phone: _____ Contact Person: _____
Name Title

Type of Activity:

___ Marketing/Retail ___ Manufacturing/Industrial ___ Mining

___ Service ___ Banking ___ Government ___ Other: _____
(Please specify)

Number of Full-Time Employees:

_____ Male _____ Female _____ Part-time _____ Total

Is your employment activity seasonal? ___ Yes ___ No

Do you presently employ any students? ___ Yes ___ No

How many? _____ Full Time _____ Part time _____

How many new employees do you expect to add within the next year? _____

In which areas could openings occur?

___ Accounting	___ Electronics	___ Secretarial
___ Administration	___ Engineering	___ Supervisory
___ Clerk-typist	___ Health Technology	___ Others _____
___ Drafting & Design	___ Modeling Technology	_____ (Please specify)

Would your firm be interested in participating in the Cooperative Education program being planned for our college? ___ Yes ___ No

Comments:

Survey completed by: _____
Name Title

Date: _____

There can be little doubt that the cooperative education program attracts additional students to its institutions. Its student advantages tend to sell it, and college recruiters commonly invite co-op personnel to accompany them on their rounds. Perhaps the best proof of the effectiveness of co-op in attracting students is the number of them who admit to attending a given college because it has co-op — even though they are not enrolled in the program. They just want to know it's there.

Classroom utilization is another very important consideration. Some schools claim the co-op program enables them to double their enrollment with no increase in facilities. These have to be extremely rare cases, however, if only because most schools require all students to attend classes all during their freshman year and possibly other times, too. Obviously schools like Northeastern University, Drexel University, and Cincinnati Technical College, which co-op nearly 100% of their students, get maximum use from their facilities. Other than that, it seems to be the consensus that in the first year of co-op implementation there will be little adverse impact.

A logical primary step in implementing cooperative education is to establish its roles in all study disciplines. In each discipline co-op should have specific, competency based objectives, and these objectives will be as diverse as the subjects they represent. Each co-op station should, ideally, have definite learning plans and objectives as well as articulated means of achieving them. Also needed are means of evaluating students' achievements, successes, and failures.

Course Selection

The decision as to which academic disciplines should be included in the co-op program is most complex — if only because of the number of people involved in making it. It's almost like a simultaneous equation because there are not only the academic considerations, but at the same time the very basic determination of whether or not an acceptable number of work stations will be available. Countrywide there have been so many subjects successfully handled on a cooperative education basis that one is tempted to think there are no limits. And, academically speaking, there are none. The crux will be the development of work stations. For every curriculum-related job established, a way can be devised to accommodate an academic discipline and schedule to it. So the only practical limitations to co-op are curriculum boundaries and job availabilities. For the two-year technical college the most basic problem may be selling the prospective employers on the validity and integrity of the two-year curriculum with its associate degree. Once past that obstacle, the employers will undoubtedly be more receptive to all the advantages of hiring cooperative education employees.

From the college standpoint probably the most logical way to select courses to be included in co-op is to seek the advice of the curriculum committee. The double benefit here is that, in addition to simply contributing their experience-born opinions, they get another communications opportunity — so vital to a viable, harmonious program.

Cooperative education can be conducted in several different ways. Because of varied course scheduling and different job hours, some academic disciplines can be adapted more readily to one system than another. The most commonly used plans are called alternating, parallel, and extended day. For two-year colleges they might work something like this:

The Alternating Plan is so named because students alternate quarters of job experience in the students' chosen fields.

> Alternating Plan A: First year, everyone attends classes all three quarters. Second year, **starting with the summer quarter,** half the students (Group A) start co-oping and the other half (Group B) attend classes. During the fall, winter, and spring quarters of the second year these two groups alternate quarters of classroom work with quarters of co-op experiences. Both groups graduate at the end of the **spring** quarter of the second year. Here is a layout of Alternating Plan A:

1st Year F W Sp	2nd Year Su	F	W	Sp
Everyone In Class	Gr. A Co-op	Class	Co-op	Class
	Gr. B Class	Co-op	Class	Co-op

Alternating Plan B: First year everyone attends classes all three quarters. Everyone then has a vacation during the summer quarter. Second year, **Starting with the fall quarter,** half the students (Group A) start co-oping and the other half (Group B) attend classes. During the winter, spring, and summer quarters of the second year, these two groups alternate quarters of classroom work with quarters of co-op experience. Both groups graduate at the end of the **summer** quarter of the second year. Here is a layout of Alternating Plan B.

1st Year F W Sp	Su	2nd Year F	W	Sp	Su
Everyone In Class	V a c a t.	Gr. A Co-op	Class	Co-op	Class
		Gr. B Class	Co-op	Class	Co-op

In the Parallel Plan, the student attends college full-time during his first year. Summer quarter is vacation time. During his second year, he attends college part of each day, taking a somewhat lighter-than-average class load, and spends part of each day working at a co-op job. This will add one quarter to the regular two-year college course, but the wage earning is continuous. Another type of Parallel Plan is used in some places where the student attends school three days a week and works on a co-op job three days a week.

In the Extended Day Plan, the student attends college full time during his first year. Summer quarter is vacation time. During his second year, he attends college full time every quarter, taking a full academic load, and spends after-school hours working on a co-op job. This allows him to graduate on time at the end of the spring quarter, but the work load is heavier.

Some courses are much more readily adaptable to one system of scheduling than others. Also, the type of co-op work will influence scheduling. Normally, the technical disciplines are more adaptable to one of the alternating plans, while disciplines involving students co-oping in department stores can more handily use the parallel plan. To provide the employer with constant co-op employees, it is easiest to simply alternate students on the same job.

The Alternating program illustrated here is, obviously, only one possible means of scheduling when only two quarters of co-op experience are involved. It reflects the philosophy that students are probably more acceptable to employers after a year of academic training. Another philosophy, apparently equally valid, dictates that the student also co-op during his first year, because he/she will gain more income. Whatever an institution's philosophy and however many work experiences the student will have, the schedule can be laid out according to the patterns just described.

Following is a complete two-year calendar of courses for Alternating Plan "A" outlined before.

MECHANICAL ENGINEERING TECHNOLOGY

First Year (Course Schedule)

Students	Fall Quarter	Winter Quarter	Spring Quarter
Non Co-op	Comm. Theory	Basic Comm. Prac.	Pre-Employment Interview
Co-op A	Physics I	Physics II	Physics III
Co-op B	Tech Math. I	Tech Math. II	Tech Math. III
	Engrg. Drawing I	Mech. Engrg. Drawing	Elec./Electronic Fund.
	Mach. Tools I	Mach. Tools II	Mat'l Science & Metallurgy
	Industrial Safety	Industrial Psych. I	Industrial Psych. II
	Summer Quarter		
Non-Co-op	Vacation		
Co-op A	Co-op (Work Station)		
Co-op B	Technical Report Writing	Applied Mechanics	
	Fluid Power	Mechanical Lab I	
	Technical Math. IV	Elective	

Second Year (Course Schedule)

	Fall Quarter	Winter Quarter	Spring Quarter
Non Co-op	Tech. Report Writing	Society & Tech	Basic Economics
	Fluid Power	Tech. Math. V	Engrg. Tech Computer Applications Lab
	Tech. Math. IV	Strength of Mat'ls	Machine Components Anal. and Applications
	Applied Mechanics	Digital Computers	Mech. Eng. Tech. Seminar
	Mechanical Lab I	Tech. Report Seminar	Technical Electives (2)
	Technical Elective	Technical Elective	
Co-op A	Tech. Report Writing	Co-op (Work Station)	Society and Technology
	Fluid Power		Tech. Math. V
	Tech. Math IV		Strength of Materials
	Applied Mechanics		Digital Computers
	Mechanical Lab I		Technical Report Seminar
	Elective		Elective
Co-op B	Co-op (Work Station)	Society & Technology	Co-op (Work Station)
		Tech. Math V	
		Strength of Materials	
		Digital Computers	
		Tech. Report Seminar	
		Elective	
	Summer Quarter		
Co-op A	Co-op (Work Station)		
Co-op B	Society & Technology	Digital Computers	
	Tech. Math. V	Technical Report Seminar	
	Strength of Materials	Elective	

A notable exception to the previously described, widely-used schedules are the ones used by Cincinnati Technical College. This very successful institution considers any kind of co-op work a useful learning experience for the student, so work stations are of three types:

1. Directly related to the student's academic major.
2. Indirectly related to the student's academic major.
3. Not related to the student's academic major.

Cincinnati also favors starting a student on co-op as soon as he/she starts college, and reports no significant employer dissatisfaction. To get maximum use of their facilities and provide employers with constant employee services, they have divided the calendar year into five 10-week periods with one 2-week vacation period. Any student on co-op assignment when the vacation period starts simply works an extra two weeks. Although cooperative education is not compulsory at Cincinnati Tech, over 90% of their student body are involved; yet they have experienced no schedule problems with the remaining 10% since the inception of the program in 1966. They have a special schedule for students working full time (second or third shift) and attending school on a half-time basis. Here is how their schedules work:

Schedule "A"	I	E	II	E	III	E	IV	E	V	E
Schedule "B"	E	I	E	II	E	III	E	IV	E	V

I School Term

E Co-op Employment

SPECIAL SCHEDULE	FULL TIME EMPLOYMENT 2nd; 3rd SHIFT HALF TIME SCHOOL EACH TERM

HOW IT WORKS

ALTERNATING PROGRAMS

Students Work Full Time Every Other Term (10 wks). Two Students Fill One Job By Alternating Terms of Work and School. Each Works One Year In The Two year College Program.

SPECIAL SCHEDULE

Students Work Full Time Throughout The Two Year Program (2nd or 3rd Shift) And Attend School On A Half-Time Basis.

JOB DEVELOPMENT

The most convincing proof of the benefit of cooperative education to employers is the number of employers who have voluntarily participated in the program for years and years. If these most pragmatic people were not benefiting from it, they would simply bail out.

As of 1978, there are around 30,000 employers participating in co-op in the United States alone. They range in size all the way from one-man operations through all the echelons of business and industry to the government, itself. The range of the natures of these enterprises covers the entire educational spectrum, so that, except for territorial limitations, nearly any student in any academic discipline is a potential co-op.

Almost any employer will agree that cooperative education is a constructive step backward — in that it effectively returns students to the system in which young people learned by watching and helping their elders at work. This method did leave the learners somewhat short in the theory area; perhaps modern educators as a result went too far in separating theory learning and practical experience. Now we have a great opportunity to once again meld classroom theory with on-the-job practice. Mr. H. W. Peters, an executive with the Ford Company, described cooperative education and why his company continues to engage in it year after year when he stated tersely, "It's practical. It works. It's good business!"

To illustrate typical evaluations and attitudes of employers towards the students they co-op, included here are two excerpts from a report entitled "The Impact of a Community College Cooperative Education Program on the Performance of Its Graduates," by Dan J. Ehrlich and Harry N. Heinemann, La Guardia Community College, Long Island City, New York. The opinions expressed in this survey are quite typical of those seen in dozens of other surveys taken nationwide, so the employers' favorable views of co-op are indeed widespread.

Since this is a plan for the implementation of the cooperative education program, one might safely assume that most comments, especially those from employers, are favorable. Some specific quotations might be useful in delineating the conclusions of employers who have actually participated in co-op and can relate what the students have meant to them.

One employer says, "Co-op students are young and highly motivated. They constantly introduce new ideas and challenge old procedures. They facilitate thought and action about existing programs."

Another employer expressed his satisfaction this way: "Co-op students benefited us in two ways. They have given us assistance when needed and have brought a questioning approach with them. This outlook is important to the work of an advocacy organization; often it forces us to reconsider our positions. Students who have worked for us have shown a real initiative and ability to do things with minimum supervision. The quality of their work would do credit to more seasoned staff."

These two comments reveal that among whatever altruistic motives they might have, the employers stay with this totally voluntary program because it is quite simply an excellent deal for them.

The following surveys were taken from a report entitled: "The Impact of a Community College C.E. Program on the Performance of Its Graduates." LaGuardia C.C., Long Island City, N.Y.

Dan J. Ehrlich
Harry N. Heinemann

Employers' Ratings of Employees
Rating Indexes for Various Groups[a]

Attribute	Criterion Group[b] LaGuardia Interns	Non Co-op Entry Level	Non-Co-op Training	LaG Grads Former Interns
Cooperativeness	1.33	1.77	1.71	1.23
Compliance	1.60	1.96	1.79	1.50
Quality of work	1.87	2.28	2.00	1.62
Quantity of work	1.87	2.32	1.93	1.57
Willingness to learn	1.47	1.86	1.57	1.41
Initiative	2.00	2.09	1.93	1.59
Knowledge of job	2.10	2.36	2.29	1.73
Acceptance of responsibility	2.03	2.28	1.86	1.73
Interpersonal communication	2.03	2.00	1.86	1.59
Personal maturity	2.13	2.27	2.21	1.59
Personal appearance	1.80	2.05	1.93	1.59
Attendance and punctuality	1.67	2.00	2.14	1.59
Overall attitudes and motivation	1.73	2.14	1.71	1.46
Overall skills and abilities	1.93	2.09	2.00	1.59
Overall performance	1.90	2.14	2.00	1.68
Number of respondents	30	22	14	22
Mean[c]	1.83	2.12	1.89	1.56
Standard deviation	0.31	0.61	0.42	0.33

[a] Indexes based on Excellent = 1, Good = 2, Fair = 3, and Poor = 4.

[b] A fifth group, LaGuardia graduates who had not been interns, could be rated by only two employers, and has been omitted from this table.

[c] Average for the twelve pure attributes (Cooperativeness . . . Attendance . . .and Punctuality)

ATTITUDES OF MANAGEMENT TOWARDS COOPERATIVE EDUCATION (CE)

Statement (paraphrased)	N	Agree Pct.	Disagr. Pct.	No Op. Pct.
Top management supports CE	32	90.6	0.0	9.4
Participate in CE to increase size of manpower resources	32	62.5	21.9	15.6
Plan to continue participation in CE for next few years	33	90.9	0.0	9.1
Participation in CE is good public relations	33	81.8	0.0	18.2
Turn-over of interns creates a problem in work community	33	27.3	58.8	12.1
CE interns are an asset to company work force	33	90.9	0.0	9.1
CE grads are more skilled in their (career) work are than non-CE grads	31	45.2	12.9	41.9
Through participation in CE, employer plays important role in higher education	33	63.6	12.1	24.2
Participation in CE is too costly in financial outlay or personnel time	33	3.0	87.9	9.1
Supervision of interns is valuable experience for employees	33	54.5	21.2	24.2
Participation in CE has helped us expand	33	33.3	45.5	21.2
Interns develop more mature work attitudes than non-CE peers	33	57.6	18.2	24.2
Participation in CE reduces costs of maintaining large personnel force	33	39.4	45.5	15.2
Expect CE grads to move up career ladder more rapidly	33	51.5	21.2	27.3
Training interns is less costly than training regular employees	33	39.4	42.4	18.2
We hire grads as full-time employees when positions become available	33	72.7	6.1	21.2
Interns understand and accept standard work rules	33	87.9	9.1	3.0
Participation in CE provides greater flexibility in regular personnel allocation	32	68.6	12.5	18.8
Participation in CE provides larger range of skills among employees	33	54.5	27.3	18.2

Certainly nothing in co-op is more important than recruiting employers. But there are probably many more **wrong** than **right** ways to do that. Job placement people call on employers now, and it is needlessly irritating for several people, each unaware of the others, to call on the same employer, when one coordinated call would suffice. Even if a company wants to hire students from more than one discipline, it is usually best to have only one coordinator call on that company. Consultation by that coordinator with the other disciplines will retain flexibility in the system. Perhaps an institution's plan will be to develop prospects by presentations to Rotary and other service organizations. Experts in the co-op field insist that, as with employers, the higher in an organization contacts can be started, the better. Coordinating with job placement people is necessary before making contact with an organization. Local employers may presently be employing co-ops from other distant colleges and universitites. A local institution's entry into co-op should not be regarded as an intrusion on that arrangement. Even though some of those schools have the same courses, the local co-op staff should not look upon them as competition to be overcome or run out of the area, but should strive to maintain harmonious relations with everyone and to develop more co-op work stations.

The many variables in job development make it impossible to fix an absolute number of co-op students or work stations as a coordinator's responsibility. For example, in all areas, initiating a program will take more time and effort than maintaining one. Furthermore, the coordinator placing engineering technology students will probably be able to place more than a coordinator in business, because utilities and large companies needing technical help will frequently take four or more students at a time. After a program is established, a coordinator might be able to handle up to 100 students — 50 on assignment and 50 in school. But in many circumstances 50 would be an ample load, depending among other elements upon the economic climate and employment trends.

Recruiting Co-op Employers

The employer can easily be considered the most important member of the three-party co-op team, since a cooperative education program can succeed only with the employer's consent and commitment. The recruiting process, therefore, is vital and continuous, and, since it is essentially a people process, opinions about the best approach vary. Any effective recruiting procedure, however, comprises effective PR, developing and dealing with contacts, selling co-op, timing, and, of course, choosing suitable potential employers.

Efficient recruiting often begins as a follow-up to an effective PR activity, such as a presentation to Rotary or another service organization. If the recruiter has distributed some interest cards to be filled out, he/she should have acquired the names of responsible people in various companies — plus their tacit permission to call on them. The higher in the company these contacts are, the better. First, top management makes the final decision about supporting cooperative education. Second, management's endorsement of both the recruiter and the concept of co-op will make it much easier for the recruiter and coordinator to work with the personnel, training, and supervisory people who will be implementing the program once management has accepted it. If a recruiter already has a good working relationship with the personnel department, that office may introduce him/her to management. Since the personnel department's cooperation is vital in many ways, this avenue would be a tactful way of avoiding offending anyone by going over his/her head. Another valuable source of contacts is through co-op alumni, who can be the most effective sales help an institution has.

The cooperation of the college president is an extremely effective way of developing top level contacts and prospects. Potentially very helpful business people with whom it would be difficult for the co-op director to get interviews might be very willing to attend a meeting convened by the president and of which the co-op director is invited to be a part. The president can describe to his guests the college; its mission of meeting the needs of business, industry, and government; and the role of the cooperative education program in carrying out that mission. The director can then explain his specific objectives in working with the executives and their organizations. Several of these meetings a year, each attended by 15 or 20 officials, can significantly promote and expand a cooperative education program.

Good recruiting requires many personal contacts; **there is no substitute for the visit.** The recruiter should have an appointment to which he/she arrives punctually; should use a letter of introduction if one is appropriate and available; and should recognize the value of casual preliminary talk to learn the employer's strong interests, if, of course, time permits. Since management people usually have busy, tight schedules, the recruiter's visit should be brief. The presentation must be substantive, thorough, and impressive, yet terse and easily understood. Small visual aids such as charts and pictures contained in a ring binder can help illustrate each point and make the presentation easier to remember. The courtesy of a thank you letter after the visit will also help the manager remember both the recruiter and the presentation.

The recruiter should realize that, although his/her first interview may not gain the prospective employer's approval of co-op, that visit may be the most important. The recruiter should know what concerns and reservations employers typically have, and either he/she should be able to resolve many of those issues, or the presentation should be planned to answer the employer's questions almost before they occur. The following concerns and opinions have arisen out of meetings held to exchange information and attitudes on the implementation of cooperative education. (Points are not arranged in order of importance.)

1. My company would like to upgrade our high school co-op program by including college students and curricula.
2. Start co-oping the students late in their schooling when they have more education in their major fields.
3. The first problem will be to sell employers on the integrity of two-year technologies.

4. Companies need at least six months to work co-op students into their budgets.
5. Companies want to know why it's to their advantage to hire co-op students.
6. The success of the co-op program will be based on the companies' satisfaction.
7. Termination of a student before the end of an agreed term has never been a problem.
8. Students should work longer than one quarter at a time (say, half a year) on the co-op job. (Not unanimously held.)

After a recruiter's first interviews have answered prospective employers' questions about how co-op works in general, he will have to continue his selling partly through how he handles his relations with the employers and partly through how he answers specific questions about how co-op can feasibly become a part of an employer's company. Good timing and enough lead time will also help the recruiter achieve his objectives.

Any employer requests should be handled speedily and efficiently. Despite increased paperwork, a properly run cooperative education program gives an employer a solid return on a sound investment. One of the educational tasks a recruiter may have is to convince the employer that a graduate of a two-year technical school can meet the qualifications required in the employer's job description as well as an engineer. Since an engineering graduate of a four-year college may be insufficiently challenged by and over-qualified for some jobs, the ideal solution is to hire the two-year technical student and free the engineer for work more challenging to his/her abilities.

Participation in a co-op program can help operations run more smoothly in other ways. Companies employing 100 or more typically consider about 2% of their line jobs as training stations. A company employing two to four co-op students is giving itself an important hedge against personnel shifts, attrition, and turnover.

Sizable companies whose corporate offices are distant from the location of the work station may need considerable time and the development of special procedures to work a cooperative education program into their budgets and schedules. An employing company's acceptance of co-op might be gained by suggesting that (where feasible) co-op be charged off as a corporate expense, not a local one. This solution can make the difference between acceptance and rejection in many retail establishments, for example. Allowing plenty of time to make such corporate decisions will help both the college and the employer.

Another important facet of timing in recruiting activities is how the coordinator manages interested and willing students in relation to available employers. Students usually want immediate action, and the coordinator will, of course, try to meet the job wants or needs of potential co-op students. Since enrolling students in the program too long before jobs are available can result in dissatisfaction at waiting for an assignment, a recruiter is well advised to have a committed group of employers ready to receive students.

If the co-op students are to be placed in September, employers should be established between February and June. April and May are the times to recruit the students, with interviews between employers and students taking place during July and August. It is unwise to try to make final arrangements with students too far in advance. Their plans are less stable than those of employers and can change very quickly.

The recruiter should remember that the United States government is a most enthusiastic employer of cooperative education students. In 1978, the Federal government employed over 10,400 students on cooperative education-work/study plans. The selection includes all disciplines and the distribution of stations covers all 50 states plus Puerto Rico. Details pertinent to the hiring and employment of co-ops are covered in the publications such as the United States Civil Service Commission Federal Personnel Manual System, a copy of which is included in the section of this report titled "U.S. Government."

RECORD KEEPING

Forms To Be Used In the Co-Op Program

These forms are suggestions, only, and may be changed many ways to fit virtually any situation. Many experts and experienced people in co-op advise against any written prior agreement requiring the employer's signature. The feeling is that many employers will regard it as a contract and may turn the program down rather than sign anything. No legitimate employer, however, should object to the specification in writing of such things as the student's wages and expected work period.

Sometimes a student agreement form is filled out, specifying the periods during which the student will co-op and in many cases even working out the courses he/she will take during different periods on campus. The form, dated and signed by both the student and the coordinator, goes into the student's file. The agreement can be broken without penalty, but it shows that at one point two people agreed on the plan.

A form is made out, usually in triplicate, specifying the name of the co-op employer, the reporting date, time, and place, and the person to whom the student should report. The employer's copy is sent out so that he gets it several days ahead of the reporting date — to allow time for correction of any errors or to make any changes desired. The second copy is given to the student and the third is filed.

If students will be living in a location distant from the campus, each is given three postage paid, college-addressed postcards on which to record the day and date reported, name, address, and phone number of the employer, supervisor, building and division in which the student will work, student's residence address and phone number. Three are given to allow for residence changes. As these are received by the cooperative education office, they are filed in the student's personal file (clipped together with the most recent on top if more than one are received). Perhaps a blank postcard could be given, too, in case the student has a question he doesn't mind sharing with the mailman.

A midterm report may be required, especially from the first term students. If they are unhappy about anything, 90% of the difficulties can easily be ironed out by the coordinator's stepping in and discussing it with the supervisor.

The student's end-of-term report must be mailed or brought to the co-op office at least a day before the student's scheduled interview with the coordinator. About two weeks before the term ends, the employer should receive the form upon which to evaluate the student. He is asked to return it about the middle of the student's last week so it has time to arrive at the co-op office before the student's interview.

From the interview, the student's evaluation form, and the employer's evaluation form, the coordinator decides whether the co-op experience has been satisfactory or unsatisfactory and so notes on the student's transcript in order for credit to be awarded if warranted.

George Miller's "Southeastern Center Handbook for Cooperative Education" contains the following additional, very practical suggestions concerning forms for the co-op program:

1. Never design or print a form unless you need it.
2. Have only a minimum, economical number of any form printed at one time.
3. Review forms at least once a year to see that they are doing the job for which they are intended.

4. Exchange forms with several other co-op programs each year to see if someone else has a better idea.
5. Use color (light, bright colors preferred) in printing forms to identify each more easily in a folder or on a desk.
6. Use the co-op logo/symbol/seal on all forms as an additional identification aid.
7. Design forms in some standard, easy-to-use size. Off sizes are more costly to print and often don't fit file folders or boxes.

The forms shown next are samples only. They can be amended in any way appropriate to a situation.

APPLICATION FOR COOPERATIVE EDUCATION

Name: _____ Phone No. _____
Last First Middle Initial

Address: _____
Street City State ZIP

Marital Status: _____ Children: _____ U.S. Citizen? _____

Social Security Number: _____ Date of Birth: _____

High School: _____ City: _____ State: _____

Date of Graduation: _____ Academic Major: _____

Are you a veteran? ____ Yes ____ No Educational Experiences In the Military:

_____

_____

Status at Stark Technical College: ____ Freshman ____ Sophomore.

Grade Point Average: _____ Academic Major: _____

Courses Completed:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

cont'd.

Working Experience to date:

COMPANY	LOCATION	DATES	DUTIES

List any serious illness or physical limitations: _____

_____

Parent, guardian, or spouse: _____ Phone No. _____
Relationship

Hobbies and outside interests: _____

_____

Type of job and duties desired: _____

_____

I, the undersigned, wish to apply for admission to the Cooperative Education Program at Stark Technical College.

I agree to abide by all the terms, requirements, policies, options, and specific standards set forth by the Cooperative Education Department of Stark Technical College and listed on the Student Agreement Form.

I further agree to continue working on my co-op job until I have been officially released or transferred by my coordinator. I will not, at any time, terminate or arrange with my co-op employer to be released from my co-op job without a prior written approval from my coordinator.

I hereby authorize the Cooperative Education Department to release to concerned parties information relating to my academic transcript and cooperative education records when, in the judgment of the professional staff, this information will be of value to my personal and/or professional development.

Date: _____ Student's Signature: _____

_____

Office Use, Only

Interviewed By: _____ Date: _____

Comments: _____

_____

_____

Suggestions For Co-op Placement: _____

_____

_____

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DEPARTMENTAL RECOMMENDATION FOR PROSPECTIVE CO-OP STUDENT

To: _____ Co-op Coordinator

for the _____ department. Date _____

Attached is the application for _____ who indicated that he/she is a student in your department. If he/she is not, please return these forms to the Cooperative Education Department immediately. Otherwise, please complete these pages and return them to us at your earliest convenience. Thank you.

ACADEMIC RECOMMENDATION:

1. Has this student satisfactorily completed and received credit for enough courses to be considered of sophomore standing? _____
2. Is the student carrying a cumulative GPA of at least 2.0? _____
3. Has the student completed the minimum number of courses or accumulated the minimum number of credit hours required by your department till now? _____
4. Did the student carry a full course load during the last term? _____
5. What is your recommendation for this student with regard to the cooperative education program? ____ Very high ____ High
   ____Moderate ____ Low ____ Do not recommend

   Comments:

Signed: _____
Co-op Coordinator

_____
Department

COOPERATIVE EDUCATION JOB LISTING

Employer's Name _____

Employer's Address _____
Street City ZIP

Employer's Phone _____ Type of Business _____

Employer's Co-op Contact _____
Name Title Phone Extension

Co-op Job Title _____

Co-op Job Description _____

_____

_____

Co-op Job Requirements _____

_____

_____

_____

_____

_____

_____

Special Student Capabilities or Characteristics Desired By Employer _____

_____

_____

_____

_____

_____

Department _____

Shift and Normal Hours _____

Normal Number of Working Hours _____ per _____. Wage _____ per _____

Comments: _____

_____

_____

_____

_____

Stark Tech Contact _____ Date _____
Name Department

TRAINING PLAN FOR COOPERATIVE EDUCATION STUDENTS

Student's Name: _____ Major: _____

Date: _____

Employer: _____ Address: _____

Student's Job Title: _____

Company Department: _____

Immediate Supervisor: _____ Title: _____

Student's Duties and Learning Responsibilities: 1. _____

_____

_____

_____

2. _____

_____

_____

_____

3. _____

_____

_____

_____

4. _____

_____

_____

Special Training Assignments:

Supporting Classroom Experiences:

Comments:

Signed: _____ _____ _____

Coordinator Student Employer

STARK TECHNICAL COLLEGE
CO-OP STUDENTS
SCHEDULE OF COURSES

Student: _____

Department: _____

Major: _____

Signed: _____
Faculty Advisor

Date _____

☐ Alternating A. ☐ Alternating B

☐ Parallel

Signed: _____
Co-op Director

Signed: _____
Student

FALL	WINTER	SPRING	SUMMER

FALL	WINTER	SPRING	SUMMER

STUDENT AGREEMENT FORM

I, _____, a student in the

_____ department, agree to work with _____
(name of company)

_____ starting _____ 19 ____
(month) (date)

and ending _____ 19 ____ on the cooperative plan
(month) (date)

in accordance with the regulations issued by the Cooperative Education Department. I agree to accept the wage of $ _____ per _____ for this work period.

I understand that I am to continue work on this job until released or transferred by the Co-op Department. I will not terminate nor arrange with my employer to be relieved of this job, nor will I arrange additional work sessions (this does not pertain to overtime work) without the prior approval of the Director of Cooperative Education.

It is understood that I will:

A. Adhere to all policies of the employing firm.
B. Report to work punctually and, if unable to work because of illness or emergency, will notify the employer and co-op office promptly.
C. Direct my energies to the completion of work assignments.
D. Return to campus and not continue to work for the employer at the end of my period of cooperative experience. (Exception: Graduation.)
E. Not apply for unemployment benefits due to the fact that I am a co-op student and am leaving voluntarily without cause attributable to the employer.

This agreement does not bind my employer to continue my services beyond the above-mentioned dates but is entered into with the expectation on his part and the understanding on mine that I will work on this job for the period of time specified in the cooperative education program.

Note: The Co-op Coordinator shall be contacted immediately if the employer has a problem with the student or the student has any problem on the job.

Student	Co-op Education Director	Co-op Coordinator
Date	Date	Date

_____ By: _____
Employing Company

Title: _____

Date: _____

COOPERATIVE EDUCATION EMPLOYMENT AGREEMENT

Definition: Cooperative Education is a college level program which combines outside, study-related job experience with in-class academic work.

COLLEGE RESPONSIBILITIES:

1. The college shall supply to the employer only students of sophomore standing who are carrying a grade point average of at least 2.0 and who, as determined by interview and screening, are thought to be the best qualified for the job opening available.
2. The college shall supply a co-op coordinator to work with the employer on all phases of the cooperative education program.
3. The college will explain as thoroughly as possible to the student all of the employer's wishes and requirements and will be ready at all times to work with all parties concerned to solve any problems which might arise.
4. The program director may withdraw and/or transfer a student-trainee whenever he deems it necessary and in the best interests of the program.

EMPLOYER RESPONSIBILITIES:

1. The employer shall employ the student of his choice in the field of work agreed upon, for the agreed upon wage, and for the agreed upon time.
2. The employer shall follow all federal, state, and local labor regulations regarding minority groups and/or minors.
3. The employer shall not transfer or dismiss a student trainee without giving advance notice to the program coordinator.
4. The employer or his appointed representative shall assist the program coordinator in evaluating the student trainee's performance, habits, and attitudes.
5. The employer agrees that he will not employ the student trainee on a full time basis if the student trainee drops out of the program prior to its completion.

STUDENT RESPONSIBILITIES:

1. The student shall make no false statements nor shall he withhold any pertinent information regarding his admission to the cooperative education program.
2. The student shall report punctually and regularly for work and shall conduct himself/herself at all times in accordance with the employer's wishes. If unable to work because of illness or emergency, he/she will notify the employer and co-op office promptly.
3. Adhere to all policies of the employing firm.
4. Direct his/her energies to the satisfactory completion of work assignments.
5. Return to campus and not continue to work for the employer at the end of the period of the cooperative experience. (Exception: Graduation.)
6. Not apply for unemployment benefits due to the fact that he/she is a co-op student leaving voluntarily without cause attributable to the employer.

STATEMENT OF COOPERATION

I fully understand the responsibilities of all parties involved in the Cooperative Education Program and shall make a reasonable effort to do my part to make it a successful learning experience.

Student	Date
Employer	Date
Coordinator	Date

APPRAISAL INSTRUCTIONS

This form should be completed by the individual in the best position to evaluate the employee's training. The evaluation consists of two basic parts:

(1) PERFORMANCE RECORD

The completion of Part 1 is to be based wholly on the employee's performance as related to the standards of his present jobs. In completing this section the rater should consider the student's performance as compared with other students of comparable academic level and with other personnel assigned the same or similarly classified jobs. The employee's potential should not play a part in the evaluation of his performance.

(2) PROFESSIONAL DEVELOPMENT

In Part 2 emphasis should be placed on the student's relative strengths and weaknesses as they affect his overall professional development. The evaluation of his present performance (Part 1) indicates only how well he is doing on his present job. By considering the student's strong points and limitations, guidance can be provided to enhance his achieving maximum professional potential.

Appraisals should be made only on those sections where the supervisor feels reasonably competent to judge the individual accurately. The rater is encouraged to qualify his evaluations in areas where further information would be helpful by using the spaces provided for comments.

1. PERFORMANCE RECORD

The areas of performance listed in this section are generally applicable to most positions. The rater is encouraged to add specific items, cite examples, or write explanations where necessary to clarify meaning.

A. POSTION PERFORMANCE: Assign a numerical value from 1 to 5 in the PROFILE column of the following chart to reflect the relative strengths and weaknesses of the student in each performance category. Please leave a blank space for any category which does not correspond to the student's assignment and on which you do not have sufficient information to make an evaluation.

Numerical Value	
1 (Outstanding)	One of the best you have ever supervised.
2 (Very satisfactory)	Above average but not outstanding.
3 (Satisfactory)	Average, commensurate with demands of the position.
4 (Barely satisfactory)	Lacking in important respects; below average.
5 (Unsatisfactory)	Bad attitude, inability, or any other cause.

CATEGORY	NUMBER	COMMENTS
1. Volume of work produced		
2. Quality of work produced		
3. Analytical Ability		
4. Ability to see and solve problems		
5. Accuracy and thoroughness		
6. Ability to work under pressure		
7. Oral communications effectiveness		
8. Written comm. effectiveness		
9. Original and creative thinking		
10. Ability to learn		
11.		

cont'd.

WORK HABITS: Check column which best describes the student's individual work habits. Please evaluate each characteristic individually.

CATEGORY	Above Average	Average	Below Average
1. Effective in preparing and organizing work			
2. Takes the initiative; self starter			
3. Adjusts to non-routine assignments			
4. Keeps constructively busy and alert			
5. Healthy attitude toward company, its objectives and policies			
6. Cooperative working with others			
7. Diligence and perseverance			
8. Willingness to accept responsibility			
9. Works with industry and drive			
10.			

PROBLEM CHECK LIST: Listed here are various categories of problem behavior some of which may be common to even outstanding professionals. In considering the student's total performance, indicate those characteristics that may have had a negative effect on his overall effort. This information will be helpful to the student's career counselor in trying to assist the student with his professional development.

CHECK ONLY THOSE CATEGORIES WHICH ARE APPLICABLE

CATEGORY	Occasional Problem	Serious Problem
Limited technical ability		
Poor attitude		
Lack of experience		
Personality conflicts		
Personal Problems		
Unable to transfer academic training to job requirements		
Negative reaction to criticism		
Negative reaction to supervision		
Lack of initiative		
Poor health		
Immature		
Lack of interest in company		
Lack of interest in job		
Inappropriate grooming		

Comments (Explanations or examples) _____

_____

_____

_____

_____

ATTENDANCE: __Regular __Irregular PUNCTUALITY: __Regular __Irregular

OVERALL PERFORMANCE:	(A) Outstanding	(B) Very Satisfactory	(C) Satisfactory	(D) Barely Satisfactory	(E) Unsatisfactory

2. PROFESSIONAL DEVELOPMENT

A. PERSONAL CHARACTERISTICS that will help or hinder the student's professional development. Consider such categories as: business maturity, personal appearance and habits, authority acceptance, self-reliance, physical vigor, dependability, desire for self-improvement, adaptability, leadership abilities, enthusiasm, honesty, acceptance of constructive criticism, and willingness to adjust self-interest to group interests. (Others may be added by rater.)

Positive	Negative
1. _____	1. _____
_____	_____
2. _____	2. _____
_____	_____
3. _____	3. _____
_____	_____

B. GROWTH AND DEVELOPMENT

1. Does this student appear to be making satisfactory progress for his stage of development? ____ YES ____ NO If "no" please explain:

_____
_____
_____
_____

2. What suggestions do you have for the student in order to increase his value to the organization and to further his professional development?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

C. This student has ____ has not ____ co-oped with us before.

D. I would ____ would not ____ be inclined to hire this student in the future if the chance should arise.

Rated by: (Preferably Immediate Supervisor) _____

Title: _____ Department: _____ Date: _____

Reviewed by Employer's Program Administrator: _____

Title: _____ Department _____ Date: _____

Rate of pay at beginning of period: _____ per _____. Latest change in rate of pay was from: _____ per _____ to _____ per _____ effective _____

This report has been discussed with the student: ____ Yes ____ No.

EVALUATION OF STUDENT

STUDENT'S NAME _____ S.S. # _____

DEPARTMENT _____

PERSONALITY TRAITS. Please rate this student on the following:

ATTITUDE.

APPLICATION TO WORK
- ☐ Outstanding enthusiasm
- ☐ Very interested, industrious
- ☐ Average diligence, interest
- ☐ Somewhat indifferent
- ☐ Definitely not interested

ABILITY TO LEARN
- ☐ Learns exceptionally well
- ☐ Learns work readily
- ☐ Average work understanding
- ☐ Rather slow in learning
- ☐ Very slow to learn

DEPENDABILITY
- ☐ Completely dependable
- ☐ Above average dependability
- ☐ Usually dependable
- ☐ Sometimes undependable
- ☐ Unreliable

INITIATIVE
- ☐ Proceeds well on own
- ☐ Proceeds on own occasionally
- ☐ Does all assigned work
- ☐ Hesitates
- ☐ Must be pushed frequently

QUALITY OF WORK
- ☐ Excellent
- ☐ Very good
- ☐ Average
- ☐ Below Average
- ☐ Very poor

RELATIONS WITH OTHERS
- ☐ Exceptionally well accepted
- ☐ Works well with others
- ☐ Gets along satisfactorily
- ☐ Trouble working with others
- ☐ Works poorly with others

MATURITY — POISE
- ☐ Quite poised and confident
- ☐ Has good self-assurance
- ☐ Average maturity and poise
- ☐ Seldom asserts himself
- ☐ Timid ☐ Brash

QUANTITY OF WORK
- ☐ Unusually high output
- ☐ More than average
- ☐ Normal amount
- ☐ Below average
- ☐ Low output, slow

JUDGMENT
- ☐ Exceptionally good judgment
- ☐ Above average judgment
- ☐ Usually makes right decision
- ☐ Often uses poor judgment
- ☐ Consistently poor judgment

APPEARANCE
- ☐ Always well groomed, neat
- ☐ Mostly well groomed, neat
- ☐ Usually acceptable
- ☐ Occasionally acceptable
- ☐ Usually unacceptable

PUNCTUALITY
- ☐ Always on time
- ☐ Nearly always on time
- ☐ Average punctuality
- ☐ Frequently late
- ☐ Nearly always late

ATTENDANCE
- ☐ Never absent
- ☐ Very seldom absent
- ☐ Average attendance
- ☐ Absent fairly often
- ☐ Frequently absent

OVERALL PERFORMANCE:	Outstanding	Very Good	+	Average	–	Marginal	Unsatisfactory

This student's outstanding personal qualities are:

The personal qualities the student should strive most to improve are:

CAREER PLANS: Please list here in order of preference the types of jobs you believe fit best into the career plans of this student, so that the Co-op Director can match best the student and positions.

1. _____
2. _____
3. _____

Signed: _____ Date: _____
Co-op Coordinator

EVALUATION BY STUDENT

Student's Name: _____ Date: _____ Major: _____

Employer: _____ Department: _____

Supervisor: _____ Title: _____

Work Period Dates: From _____ To: _____

1. What are your duties? (Please describe in detail.) _____

2. How have your work experiences related to your academic studies? _____

3. How has this job added to your personal development, self-confidence, competence, perseverance, attitude, determination, human relations skills, responsibility, etc? _____

4. How has this job affected your choice of career? _____

5. How has this job differed from information you had about it before you started it?

6. Have your responsibilities been clearly and thoroughly explained? _____

7. In what ways have you been able to develop relationships with your supervisor and other employees?

8. What advice would you give other students considering this job and company?

_____

_____

_____

9. List any concerns about your future job plans you would like to discuss with your coordinator.

_____

_____

_____

10. Were you satisfied or dissatisfied with this job? _____

_____

_____

11. Were all your duties consistent with the scope of your academic studies?

_____

_____

12. Comments and suggestions: _____

_____

_____

13. What are your plans for the immediate future? (School, work, etc.) _____

_____

_____

_____

_____

May add: "What did you like best, least?"

Awarding of Academic Credit

The Ohio Board of Regents' "Standards for Approval of Associate Degree Programs" 3333-1-04 amended 1/12/78, contains the following statements:

(F) (13) (f) Cooperative education experience. A cooperative education is on- or off-campus work activity in which a student is employed, and for which he/she receives remuneration, and which augments the formal educational program in an occupational field which exists on campus. The experience is coordinated by a member of the professional staff of the college who visits the employer of the student for a conference with the student and/or supervisor at least once during the quarter, assigns the course grade to the student after appropriate consultation with the supervisor/employer, and teaches at least one on-campus course to the student whose cooperative work experience he is coordinating.

(i) Each student who is enrolled in cooperative work experience shall also enroll in an on-campus seminar.

(ii) One credit (quarter or semester) shall be awarded for a minimum of ten clock hours of cooperative work experience which is scheduled during a standard week. A maximum of thirteen credit hours may be earned in either cooperative work experience, or in a combination of cooperative work experience and field experience, over the two-year associate degree program.

The philosophy and methodology of awarding academic credit for co-op work experiences vary greatly. Some colleges have co-oping students report back to their schools every two weeks, for example, for a one-hour evening seminar report of work experiences and review of learning objectives. The administrations apparently feel more comfortable with this arrangement than with awarding credit on the basis of the work experience with only a few interim contacts or none at all. (No contact is contrary to the rules set up by the Ohio Board of Regents).

A well-known and highly successful co-op university has another method for their alternating program. The students sign up for seminars to be held after their return to the campus. They are given three hours of credit one quarter after each work session. However, credit is not actually awarded until they have completed three work assignments and three seminars, at which time nine credit hours are awarded. This institution reports that, although the running of these seminars by the faculty is completely voluntary, they always have more volunteers than they need because the faculty feel they learn so much from the sessions.

Some instructors devote a classroom hour to a panel of returned co-op students so they and the class can learn what's going on in the field. Post-secondary schools in Ohio award one credit hour for every ten hours worked weekly during the entire co-op period. For instance, if a student works twenty hours per week every week of the co-op period, two credit hours could be awarded. Thirty hours per week every week earn three credit hours, etc.

One situation certain to be encountered is the student who works full time at a regular job and decides to attend college as well. Can he be given any credit for previous work and experience? Perhaps he can under an equivalency evaluation or an examination, but not under the cooperative education program, because the work was not done under co-op supervision, regulations, and conditions. If, however, that particular job is acquired as a co-op work station, credit can be awarded under the usual conditions whenever the work is performed under co-op supervision.

Inevitably the question arises of where to apply the academic credit for co-op. Should the credit be applied as for a general elective? Add-on credit? Technical elective?

As valuable an experience as cooperative education is, there is no single definition of its exact nature. And since the learning covers so many diverse fields, exactly what type of elective could be appropriately credited? If knowledge is gained in communicative skills, why not call it social science credit? For learning discipline, chain of command, and interpersonal relations, how about social science credit?

Since not only definitions but also means of measuring the amount of competency and knowledge gained are lacking, teaching those skills in formal campus courses makes sense. Thus both the co-op and the non-co-op student would learn similar quantities and qualities of given subjects.

Another alternative would be to assess the co-op experience as add-on credit. Although this is a simple enough solution for the college, the students may oppose it. Two-year courses allow little time for electives if the student is to finish on schedule. The student might also prefer getting his work experience after graduating, thus saving the co-op fee.

A third solution would be to give technical credit for the co-op experience, whenever the experience has been sufficiently technical to be defined as such. However, even though defining technical subjects is comparatively easy, the quantity and quality of competency a student gains is still difficult to measure. And the competency gained by the co-op student might vary significantly from that gained by the non-co-op student taking a formal on-campus course.

One college attempted to deal with the credit problems by defining their various curricula in terms of competencies and grouping the competencies to form courses. Within the courses were modules not only to teach the competency but also to evaluate the student's learning of the competency. With the use of these modules a new student could not only be evaluated for any previously acquired competencies but also could be assigned appropriate modules to acquire the competencies still remaining. In this way a student's co-op experience can be evaluated in terms of competencies and he/she can be assigned the necessary modules still needed. It is necessry, of course, to establish a competency evaluation procedure for co-op work on the basis of input from the employer, student, and instructor. From this input, then, curricula can be revised when update is advisable.

These procedures not only will indicate more satisfactory ways of determining where to assign credit for co-op, they also permit closer matching of students and the programs they need. It is more nearly possible for the student to work at his/her own speed to complete the program required. In that sense, one might even conclude that another benefit might be better utilization of classrooms and lab equipment, thus minimizing the quantity of each needed.

Recognition Awards

Regardless of policies on awarding academic credit for co-op work experiences, an institution may want to consider awarding some kind of recognition symbol to those students who successfully complete all the requisites of a cooperative education program. Perhaps a diploma or some other certificate attesting to that successful completion may be presented. Some schools even go into "competition" situations and present trophies or cups to "outstanding" students, etc. Imagination, preferences, and perhaps budget will probably be the only limitations. In any case, however, ample testimony of the quantity and quality of the student's accomplishments must be entered into his/her personal folder.

Summary and Progress Reports to the Administration

For any program as full blown and important as cooperative education, certainly the administration must be kept informed. Rather than waiting for too long, it would be well to follow the example of most of the successful co-op executives by routinely submitting an annual report, perhaps like the one shown on the next page. A report must be submitted at the end of each term, if advisable. At least have the data assembled for the co-op staff's own information. Progressive charts are of tremendous value, too.

COOPERATIVE EDUCATION PROGRESS REPORT

School year: 19 ___					19 ___			
Period:	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
Student Applications								
Approvals								
Previous Holdovers								
Total Students Available								
Employer Requests (By Discipline)								
Accounting								
Business								
Computer								
Engineering								
Health								
Secretarial								
Other								
Total Employer Requests								
Students Placed (By Discipline)								
Accounting								
Business								
Engineering								
Health								
Secretarial								
Other								
Total Students Placed								
Total Students Unplaced								
Student Dropouts								
Students Completing Program								
Total Employers								
Unfilled Work Stations								
Average Weekly Gross Income/Student								
Accounting								
Business								
Computer								
Engineering								
Health								
Secretarial								
Other								
Fees Collected								
Accounting								
Business								
Computer								
Engineering								
Health								
Secretarial								
Other								
Other Fees Collected								
Total Co-op Operating Expense								
Operating Cost Per Student Placed								

*There are almost innumerable data which can be gathered and utilized. Collect whatever you like and design your own report so it will accomplish the things you want it to.

Veterans

Each cooperative education program must be approved in all detail by the State Approving Agency, Columbus, Ohio, before veterans' benefits will be paid. After receiving finalized programs, they will visit the institution to consider and evaluate each program. Assuming approval, veterans will be paid benefits according to a schedule set by the State Approving Agency. Their determination will depend at least partially on the number of credit hours the student is earning during each co-op period.

The Veterans Administration reports that an unmarried student with no dependents will be paid at the rate of $251 per month while working full time at an accredited co-op job as compared with the $311 per month he would be paid while taking a full academic load. This, of course, is for the alternating plan, and the VA feels that, since the student is earning money as part of a regular program, and since the fees are reduced, he/she will need less financial assistance from them during that time. In the parallel program the scholastic plus co-op work loads must equal a full-time academic program for any VA payment to be made; the amounts will be the same as in the alternating program.

The total number of scholastic (both academic and co-op) periods involved will also figure in the Agency's decision. Approval of each program must be filed by the State Approving Agency with the Liaison Division of the Veterans Administration in Cleveland, Ohio.

VA Regulations (Vocational Rehabilitation and Education — Trans. Sheet 457) 14270 Assessment and Pursuit of Course state that the collegiate undergraduate student must take 14 semester hours or equivalent, and that "Cooperative courses may be pursued on a full time basis only."

From Trans. Sheet 461 come the following paragraphs:

(A) Cooperative Courses. A full time program of education consisting of phases of school instruction alternated with training in a business or industrial establishment with such training being strictly supplemental to the school instruction may be approved. Alternating periods may be a part day in school and a part day on job or may be such periods which alternate on a daily, weekly, monthly, or on a term basis. For purposes of approval, the school offering the course must submit to the State approving agency, with its application, statements of fact showing at least the following: (June 21, 1976)

(1) That the alternate in-school periods of the course are at least as long as the alternate periods in the business or industrial establishment; (in determining the relationship between the two components of the course, training received in a business or industrial establishment during a vacation or officially scheduled school break period shall be excluded from the calculation:) where the course is approved as continuous part-time work and part-time study in combination, it shall be measured on the basis of the ratio which each portion of the training bears to full time as defined in VA Regulation 14270 (C) and (G). The institution portion must be at least equivalent to one-half time training and must be combined with a job training portion sufficient for the combined training to equal full-time (September 20, 1977).

(2) That the course is set up as a cooperative course in the school catalog or other literature of the school;

(3) That the school itself arranges with the employer's establishment for providing the alternate on-job periods of training on such basis that the on-job portion of the course will be training in a real and substantial sense and will supplement the in-school portion of the course;

(4) That the school arranges directly with the employer's establishment for placing the individual student in that establishment and exercises supervision and control over the student's activities at the establishment to an extent that assures training in a true sense to the student; and

(5) That the school grants credit for the on-job portion of the course for completion of a part of the work required for granting a degree or diploma [38U.S.C. (a) (2) and 1732 (b)] (March 3, 1966).

Cooperative work periods are not counted in determining whether a veteran's eligibility time for educational benefits has been consumed. And the statutory date limits for the use of veterans' benefits, based upon lapse of time.

See also: **Social Security Rules and Regulations**
CETA Rules and Regulations
Bureau of Unemployment Compensation

Co-op students in Ohio have no basis for unemployment compensation claims upon leaving a co-op assignment because they have voluntarily left employers who did nothing to terminate their employment.

Following is a list of people, recognized experts in the field of Cooperative Education, who can be called upon for competent consultation and evaluation:

Mr. Paul Dubé, Director
Northeastern Center for Cooperative Education
Northeastern University
360 Huntington Avenue
Boston, MA 02115

Mr. George H. Miller, Director
Southeastern Center for Cooperative Education
University of South Florida
Tampa, FL 33620

Mr. Donald C. Hunt, Director
Midwest Center for Cooperative Education
University of Detroit
4001 West McNichols Road
Detroit, MI 48221

Mr. James T. Godfrey, Director
Western Center for Cooperative Education
University of the Pacific
Stockton, CA 95204

Mr. Angelo V. Abbott, Director
Cooperative Education and Placement
Santa Fe Community College
Gainesville, FL 32601

COOPERATIVE EDUCATION PROGRAM EVALUATION FORM

Designed by Donald C. Hunt and George H. Miller*

Name of Institution _____ Date Program Established _____

Evaluated by _____ Date _____

(Score all categories on a zero to four basis with zero indicating none, poor, inadequate, and four indicating completely adequate, total, excellent, etc.)

1. Is there an Institutional policy on cooperative education?
(All areas = 4)

None	Verbal	Written (Internally)	Published in the catalogue	Published in a student Handbook
_____	_____	_____	_____	_____

2. For the colleges and curricula involved in cooperative education, is it an integral part of the educational program?

0	1	2	3	4
_____	_____	_____	_____	_____

3. To what degree is the faculty involved in the cooperative education program?

0	1	2	3	4
_____	_____	_____	_____	_____

4. Do employers participate in the cooperative program as advisors, consultants, or resource persons?

0	1	2	3	4

5. Is there adequate administrative support from the following: (All areas = 4)

None	Chairpersons	Deans	Chief Academic Officer	President

6. By academic credit or other means, is there adequate recognition of the educational values of cooperative education?

0	1	2	3	4

7. Is there adequate communication between the cooperative education department and the following: (All areas = 4)

None	Students	Faculty	Administration	Employers

8. If there is an advisory committee for cooperative education, does it include representation from the following: (All areas = 4)

None	Co-op Staff	Faculty	Employers	Administration

9. Have the institutional costs for the operation of the cooperative education program been determined for the following: (All areas = 4)

None	Clerical and Software	Professional Staff	Travel	Space and Equipment

10. Does the current budget sufficiently support the items in No. 9?

0	1	2	3	4

11. Is there adequate time and funds available for coordinators to visit students on the job?

0	1	2	3	4

12. Has a realistic load based on the ratio of student/coordinator and student/clerical staff been established in order to determine personnel needed?

0	1	2	3	4

13. Are space facilities adequate?

0	1	2	3	4

14. Is the location of the office convenient to students?

0	1	2	3	4

15. Is the career reference library adequate?

0	1	2	3	4

16. Is the student handbook adequate for guiding students so as to insure that they understand the program requirements?

0	1	2	3	4

17. Does the professional staff have adequate training, experience, and interest necessary for effectively operating the program?

0	1	2	3	4

18. Are financial aids, libraries, health services, sports activities, etc., available to cooperative students when they are on cooperative training assignments?

0	1	2	3	4

19. Is there an adequate method of collecting and cataloging data on a periodic basis to insure a running historical record of the program?

0	1	2	3	4

20. Was there a reasonable set of objectives established when the program was started?

0	1	2	3	4

21. Has the number of students entering the cooperative program since the program was started been reasonable in terms of the original objectives?

0	1	2	3	4

22. How well do the training positions serve the career objectives of the cooperative students?

0	1	2	3	4

23. As on measure of a viable program, is the employers' retention rate of cooperative students after graduation adequate?

0	1	2	3	4

24. Do any of the following hold membership in the Cooperative Education Association, the Society for Field Experience Education, the Cooperative Education Division of the American Society for Engineering Education, the National Commission for Cooperative Education? (All areas = 4)

None	Institutional	College	Faculty	Coordinators

25. Evaluator's evaluation of the success of the cooperative education program.

0	1	2	3	4

Score _____ Evaluation Rating _____

Scoring Key:

After Three Years of Operation		One to Three Years of Operation	
90-100	Excellent	85-100	Excellent
80- 90	Good	70- 85	Good
70- 80	Fair	60- 70	Fair
60- 70	Needs improvement	50- 60	Not progressing adequately
Below 60	Something is wrong	Below 50	Program is in trouble

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

COOPERATIVE EDUCATION PROGRAM

PERFORMANCE REPORT

(Title VIII, The Higher Education Act of 1965)

FORM APPROVED O.M.B. NO. 51-R1141	
GRANT NUMBER	
PERIOD COVERED	
FROM	TO

NAME OF INSTITUTION

Explain the progress made during the grant period in implementing the program in terms of the aims and objectives as set forth in your application and approved budget. Include among your comments such factors as: (1) the degree and extent of commitment the administration has given, including financial support both immediate and long-range; (2) the performance of administrative staff, and the development of procedures as related to the program, (3) the role of the faculty in developing the program and the extent of cooperation received, (4) the number of student job placements this year, (5) the receptivity of students to the program in terms of completing their academic programs, and (6) the response of employers in providing meaningful work assignments. Include any other pertinent comments. (Use reverse side if additional space is needed.)

Further monies or other benefits may, but not necessarily, will be withheld under this program unless this report is completed and filed as required by existing law and regulations (20 U.S.C. 1037b, 45 C.F.R. 182).

TYPE OR PRINT NAME OF PROGRAM COORDINATOR	SIGNATURE OF PROGRAM COORDINATOR	DATE

INSTRUCTIONS FOR COMPLETING THE FINANCIAL AND PERFORMANCE REPORTS

GENERAL

Financial Status and Performance Reports for Cooperative Education Program are due on an annual basis, 90 days after the end of the grant period.

The original and two copies of the reports (Financial Status and Performance) are to be sent to: U.S. Office of Education (13.510)
Grant and Procurement Management Division
400 Maryland Avenue, SW.
Washington, D.C. 20202

Further monies or other benefits may, but not necessarily, will be withheld under this program unless these reports are completed and filed as required by existing law and regulations (20 U.S.C. 1087b; 45 C.F.R. 182).

FINANCIAL STATUS REPORT (SF 269)

The standard Financial Status Report (Standard Form 269, OMB No. 80-R0180) shall be used for reporting financial information for the period given above. The following supplemental instructions for the items given below are to be used in lieu of or along with the standard instructions for the items:

Item 1 — Enter USOE, CEP.

Item 2 — Enter the Federal Grant Number.

Item 4 — If you have been assigned a DHEW entity number, consisting of the IRS employer identification number prefixed by "1" and suffixed by a two-digit number, enter the full DHEW entity number rather than the employer identification number assigned by the IRS.

Item 10 — Use column (a) only and enter as a column heading "CEP".

PERFORMANCE REPORT (OE 411)

See specific instructions on the Performance Report form.

U.S. OFFICE OF EDUCATION
Cooperative Education
C.F.D.A. 13.510

ADMINISTRATION RATING SHEET
1977-1978 (FY 77)

RATING SCALE	INSTITUTION
1 — No Evidence Provided 2 — Minimal Evidence Provided 3 — Adequate Evidence Provided 4 — Excellent Evidence Provided	PR NUMBER
	PROGRAM PLANNING IMPLEMENTATION STRENGTHENING EXPANSION

Indicate appraisal in the box to the right for each of the following items using the above rating scale.

	1	2	3	4
I. The extent to which evidence is provided of actions taken by the president, deans and department heads in support of the co-op program.	☐	☐	☐	☐
II. The extent to which evidence is provided of increasing commitment of institutional resources broadening the size and scope of the cooperative education program.	☐	☐	☐	☐
III. Co-op program policies and procedures have been approved by the administration integrating the co-op program into the academic objectives of the institution.	☐	☐	☐	☐
IV. Curriculum and calendar changes have been implemented to support the co-op program.	☐	☐	☐	☐
V. Periods of educationally related co-op work experiences are of sufficient duration and number to make a significant contribution towards meeting participating students' educational and career goals.	☐	☐	☐	☐
VI. Evidence is provided of faculty participation in planning and administering the co-op program.	☐	☐	☐	☐
VII. The degree to which provision is made for supervision of on-the-job performance of co-op students by institutional staff.	☐	☐	☐	☐
VIII. Qualifications of assigned personnel are adequate to carry out varied programs responsibilities.	☐	☐	☐	☐
IX. Degree to which measures approved by the institution promote interaction between the student's co-op work experience and his academic study.	☐	☐	☐	☐
X. Employer support provides a sufficient number and variety of co-op student employment opportunities related to student academic or career objectives.	☐	☐	☐	☐
XI. The proposal provides for evaluating co-op program effectiveness and determining the extent to which program objectives are being accomplished.	☐	☐	☐	☐
XII. Evidence that the applicant will expend on the cooperative education program, no less in the current year than was expended in the previous year.	☐	☐	☐	☐

XIII. Extent of institutional commitment evidencing continuation and long term co-op program development upon termination of federal funding assistance. ☐ ☐ ☐ ☐

XIV. The proposed budgeted cost in relation to the indicated program activities are:

REASONABLE HIGH EXCESSIVE

XV. COMMENTS

CIRCLE ONE OF THE FOLLOWING

HIGH MEDIUM LOW NOT RECOMMENDED

IF RATED HIGH, RECOMMENDED RANGE OF FUNDING $ _____

Panelist's Signature _____ **Date** _____

STAFF Concur With Recommendation

Disagree: Basis for Disagreement Recommended Funding $ _____

GUIDE TO PROVISIONS OF FPM CHAPTER 308, SUBCHAPTER 4, GOVERNING EMPLOYMENT OF ASSOCIATE DEGREE COOPERATIVE EDUCATION STUDENTS UNDER SCHEDULES A AND B.

Note: This has been developed as a check list for use of agency personnel when hiring associate degree co-op students in order to assure compliance with all instructions applicable to students under Schedule A and to those under Schedule B.

Subject and Related FPM Section	Subsections Applicable to Schedule B Students	Subsections Applicable to Schedule A Students
DEFINITION OF STUDENT Section 4-2	a(2)	a(2)
APPOINTMENTS Section 4-3	a, b(1), c(1), c(3) & d(1)	a, b(2), c(2), c(3) & d(2)
ELIGIBILITY Section 4-4	a, b, c, d and e	c and e
CLASSIFICATIONS AND QUALIFICATIONS Section 4-5	a and b	a and b
SELECTION AND RETENTION Section 4-6	a, b, c and d	a, b and c
WORK PERIODS AND ASSIGNMENTS Section 4-7	a, b(1) thru (7), c, d(1) and d(2)	a, b(1), b(4), b(5), b(6), b(7), c, d(1) and d(2)
COMPENSATION AND CEILINGS Section 4-8	a, b (in part), c (in part), d, e (in part), & f (in part)	a, b (in part), c (in part), d, e (in part), & f (in part)
RIF, DROPOUT, AND REAPPOINTMENT Section 4-9	a (in part), b and c	a (in part)
PERFORMANCE APPRAISAL PROMOTION AND TERMINATION Section 4-10	a, b, c, and d	a, b, c and d
EMPLOYMENT AFTER GRADUATION Section 4-11	a, c and d	b
CREDIT TOWARD PROBATION AND TENURE Section 4-12	a and b	Subsection not applicable

U. S. GOVERNMENT

Summarization of Federal Agency Reports

FEDERAL EMPLOYMENT OF COOPERATIVE EDUCATION STUDENTS

FY 1977*

*U.S. Civil Service Commission
Bureau of Recruiting and Examining

THIS REPORT provides a summary of employment of undergraduate cooperative education students in Federal agencies during the fiscal year 1977. It does not include the relatively small number of high school students who are also employed as co-ops in the Federal Government, nor does it report on graduate students, since their participation in cooperative education was not authorized until the fiscal year 1978.

Cooperative education was initiated in the early 1900's as a means of strengthening student learning by alternating classroom work with study-related employment in the public and private sectors. For the student it is a means of earning and learning. For the college sponsoring a co-op program it is a means of strengthening the educational process. For the employer it is an effective recruitment and low-cost training method and one very productive means of supporting affirmative action efforts.

In Federal agencies, cooperative education is utilized primarily as a means of identifying and preparing 2-year and 4-year students for career appointments after graduation. A majority of the students are selected because they are studying in fields related to occupations in which there is a shortage of candidates.

This report is prepared as a service to employers inside and outside the Federal Government. It can also provide helpful guidance to colleges which are seeking placements for co-op students.

Single copies of the report may be obtained at no cost by employers and educators from the Staffing Resources Division, Bureau of Recruiting and Examining, U.S. Civil Service Commission, 1900 E Street, N.W., Washington, D.C. 20415 (Area Code 202-632-5677). The report may be reproduced in whole or in part without permission.

Federal Employment of Cooperative Education Students

A Summarization of Agency Reports for Fiscal Year 1977

OVERVIEW

Over 10,400 cooperative education students were employed during the 1977 fiscal year by 33 departments and agencies of the Federal Government (see Table 1). The figure represented an increase over FY 1976 of 14 percent and a continuance of the 7-year growth trend in co-op hires.

The students came from 559 campuses in the 50 States, the District of Columbia, Puerto Rico and Panama (see Table 3). They included 60 percent of the colleges and universities reported by the National Commission for Cooperative Education as having operating co-op programs. While co-op assignments were spread across 19 occupational groups, over one half the students were employed in engineering and architecture or in budget and accounting (see Table 2). The number of Federal worksites where co-ops were employed increased to 1190 from the 783 reported in 1976. There were sites located in every State and in the District of Columbia (see Figure A).

Of the 1538 students who completed their co-op programs in FY 1977 and were graduated, 60 percent were employed after graduation by the agencies in which they had received their co-op work experience.

AGENCY PARTICIPATION

The higher number of co-ops employed this year resulted primarily from large increases in the Departments of Agriculture, Air Force, Army, Transportation, and Health, Education and Welfare and in the Environmental Protection Agency. Losses in some agencies resulted primarily from tight budgets and personnel ceilings.

The Navy Department remained the Federal Government's largest employing agency. Other large employers were:

Over 1000 students: NASA
700 to 1000 students: Air Force, Army, HEW, Treasury
400 to 700 students: Agriculture, Interior, Transportation, FDIC

Several agencies did careful evaluations of their 1977 co-op programs. Significant facts turned up by their assessments are:

- Top and middle management interest in co-op has grown.
- Employment of women as co-ops, which has long been low compared to that of males, is improved in some agencies.
- An Army study of its 83 quits in 1977 showed that 58 resulted from job-related causes other than pay, and they might be remedied by improved selection and student briefings.
- Agency personnel officers who work close to large co-op programs rate co-op high as a staffing method. Excerpts from their comments:

  "Has the advantage of allowing managers to evaluate performance . . . before a formal commitment is made concerning an appointment to the professional level." (Treasury)

  "The initial management investment in a personalized individual training program, close supervision, and guidance to the student . . . has led to a highly productive, innovative, thinking employee." (Air Force)

  "An excellent way to increase our minority and female employment." (Interior)

  "Greater efficiency on the job during the early months on the payroll at the professional level." (Treasury)

  ". . . Provides talented, well-motivated students with work experience at minimum cost to the agency." (NASA)

  "Permits competition with industry's immediacy in hiring." (VA)

Figures for 1977 clearly indicated a need in some agencies for analysis of dropouts and for positive efforts to improve the rate of conversion of co-op graduates to the career service.

PARTICIPATION OF EDUCATIONAL INSTITUTIONS

Of the 559 colleges and universities which made co-op placements in the Federal Government last year, 135 had not been listed in the 1976 report. The 1977 additions were scattered throughout the country.

Fifty-seven of the 559 participating institutions were 2-year colleges, which placed a total of 556 students in 15 different agencies.

Many educational institutions have co-op agreements with only one Federal agency, while others work with 10 or more.

FORECASTS

Of the Federal agencies which submitted reports, eight made definite but cautious predictions of expansion in FY 1978. Two indicated plans to open up new occupational areas for co-op employment. Special need was indicated for students trained in research and for those with knowledge of data automation. There was also promise of continued demand for large numbers of students in engineering and accounting.

With these forecasts and the recent initiation of cooperative education for graduate students in selected majors, the overall outlook for co-op employment in the Federal Government is favorable.

Table 1
FEDERAL AGENCY PARTICIPATION IN COOPERATIVE EDUCATION REPORTED IN 1977

Employing Departments and Agencies Reporting*	Students Employed During Year		Colleges and Universities Providing Students**		Work-sites *****	Students Completing Program and Graduating	Graduates Given Career Service Appoint-ments
	Total	First-time Appointees	2-Year	4-Year			
Agriculture	625	467	4	131	216	30	17
Air Force	752	344	4	87	21	102	71
Army	982	536	10	88	50	122	56
Commerce	330	180	2	64	50	44	14
Health, Education & Welfare	868	476	1	189	47	121	103
Housing & Urban Develpmt.	105	47	—	38	16	22	6
Interior	597	346	5	113	116	53	39
Labor	84	58	1	21	17	2	2
Navy	1860	818	13	130	221	299	166
Office, Secretary of Defense	8	3	—	2	1	—	—
Transportation	542	276	—	70	48	75	63
Treasury	828	359	6	229	89	242	212
AID	15	8	—	4	1	2	—
CIA	***	***	***	***	***	***	***
Civil Service Commission	40	28	—	26	24	5	2
Defense Communications	13	4	—	5	3	2	2
Defense Logistics	160	64	4	22	23	22	9
Environmental Protect. Agcy.	400	230	4	55	40	31	9
Equal Empl. Opport. Comm.	11	8	—	2	2	1	1
Export-Import Bank	1	1	—	1	1	—	—
Farm Credit Administration	2	2	—	1	1	—	—
Fed. Deposit Insurance Corp.	413	153	—	53	97	81	53
Fed. Home Loan Bank Board	9	7	—	6	5	—	—
General Services Admin.	122	81	—	31	24	12	10
Government Printing Office	12	9	1	2	1	4	—
NASA	1391	457	12	113	13	213	61
Natl. Labor Relations Board	51	37	—	22	21	4	2
National Security Agency	66	16	1	14	1	16	10
Small Business Admin.	35	21	—	10	11	—	—
Veterans Administration	131	74	5	21	30	33	8
Totals 30*	10453	5112	****	****	1190	1538	916

*General Accounting Office and Departments of Justice and Energy employed students but did not report.
**Each campus of a multi-campus institution is counted.
***CIA cannot provide figures on participants.
****Unduplicated count: 57 2-year colleges and 502 4- or 5-year institutions.
*****Headquarters counted as one worksite.

Table 2
COLLEGE-LEVEL COOPERATIVE EDUCATION STUDENTS EMPLOYED BY FEDERAL AGENCIES — BY OCCUPATIONAL GROUP FY 1977

OCCUPATIONAL GROUP	Miscellaneous	Social Science, Psychology and Welfare	Personnel Management and Industrial Relations	General Administration, Clerical and Office	Biological Sciences	Accounting and Budget	Medical, Hospital, Dental, Public Health	Veterinary Medical Science	Engineering and Architecture	Legal and Kindred	Information and Arts	Business and Industry	Copyright, Patent and Trade-Mark	Physical Sciences	Library and Archives	Mathematics and Statistics	Equipment, Facilities and Services	Education	Investigation	Inspection and Grading	Supply	Transportation	Totals
GROUP NUMBER	000	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	
GROUP TOTALS	364	652	372	1037	506	1621	90	0	3789	105	143	421	0	481	51	258	13	44	119	57	163	167	10,453
AGENCIES																							
Agriculture	1	28	19	50	290	30			105		13	22		54	2	6		3	2				625
Air Force		5	58	93	1	85	3		306	1	23	61		4		46		16		3	45	2	752
Army	54	15	21	45	30	74			599	1	8	32		43	10	27	2	4	3	3	11		982
Commerce	3		5	41	62	17			100		3			69	1	27			2				330
Health, Education and Welfare	6	527	19	135	8	24	2		13	65	7	3		35	4	9	3	1	7				868
Housing and Urban Development		1	20	54		16			8			3							3				105
Interior	174	11	7	31	75	9			149	4	10	3		116			2	6					597
Labor	20	12	.	14		2	34		2														84
Navy		1	84	239	2	202			1028		5	98		21		43		13		44	78	2	1860
Secretary of Defense				8																			8
Transportation	36	8	8	18		17			256					6		33		1				159	542
Treasury	1	21	1	27		586				21		67					3		101				828
AID						15																	15
CIA		•		•		•			•					•		•						
Civil Service Commission	4	1	33	1													1						40
Defense Communications			1	9					3														13
Defense Logistics	8		13	16		33			10	4	2	39		6		2				7	20		160
Equal Employment Opportunity		2		9																			11
Environmental Protection Agency	39		9	51	25	6			165		19	9		65	4	8							400
Export-Import Bank												1											1
Farm Credit Administration						2																	2
Federal Deposit Insurance Corp.				4		409																	413
Federal Home Loan Bank Board						9																	9
General Services Administration	10	1	4	10		23			19	2	1	21			24				1		4	2	122
Government Printing Office	6					4			2														12
NASA		8	16	147	13	55			937	6	35	47		62	6	57						2	1391
National Labor Relations Board	2		49																				51
National Security Agency				3					61								2						66
Small Business Administration				20								15											35
Veterans Administration		11	5	12		3	51		26	1	17										5		131

*Students employed in this occupation.

Figure A
EDUCATIONAL INSTITUTIONS PROVIDING COOPERATIVE EDUCATION
STUDENTS FOR FEDERAL EMPLOYMENT IN FY 1977
DISTRIBUTION BY STATES

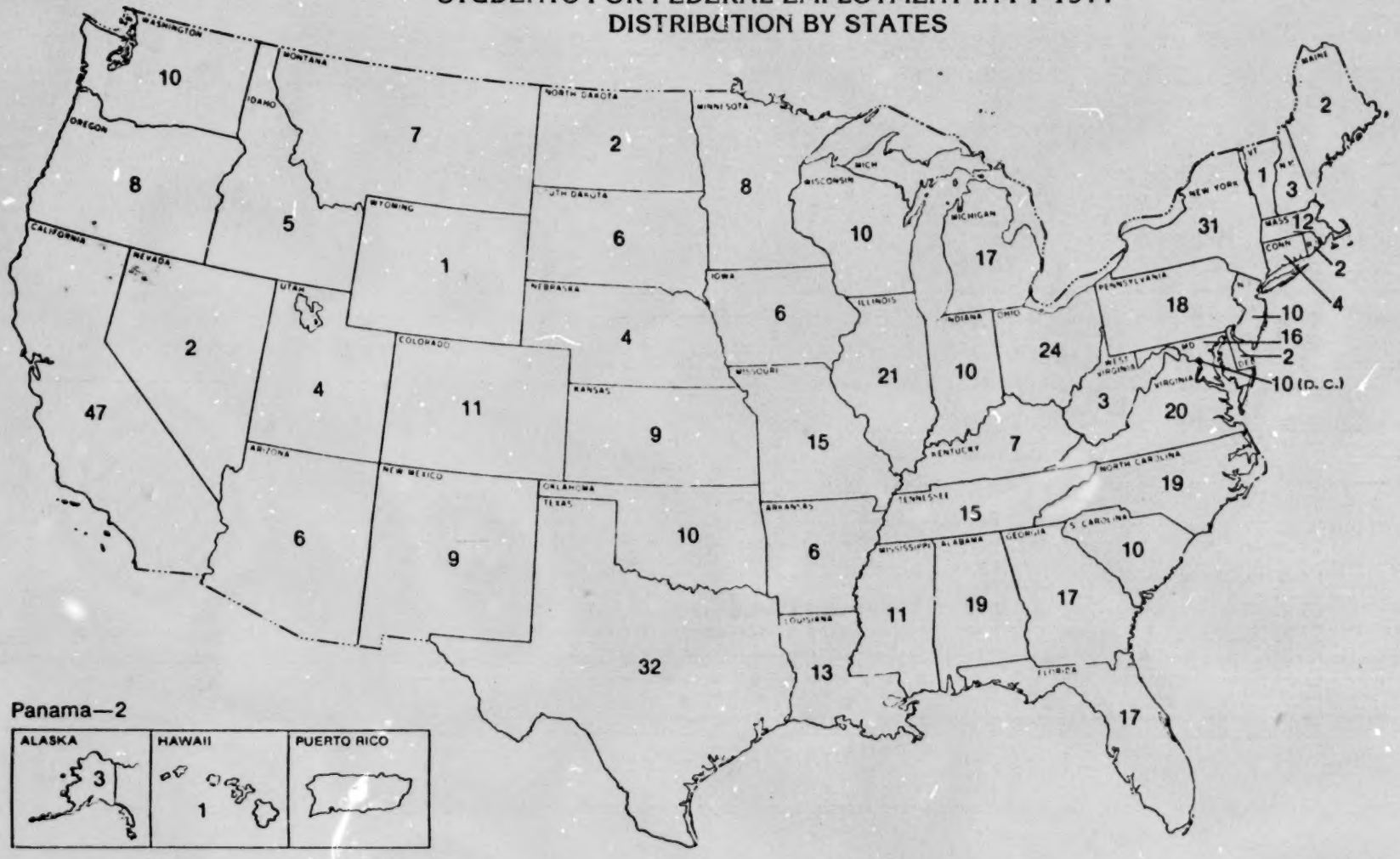

Table 3
INSTITUTIONS OF HIGHER EDUCATION PROVIDING COOPERATIVE EDUCATION STUDENTS FOR EMPLOYMENT IN FEDERAL AGENCIES FY 1977

ALABAMA	
Alabama A & M University	Normal
Alabama State University	Montgomery
Auburn University	Auburn
Auburn University at Montgomery	Montgomery
Daniel Payne College	Birmingham
Huntingdon College	Birmingham
John C. Calhoun State Community College*	Decatur
Miles College	Birmingham
Oakwood College	Huntsville
S. D. Bishop State Junior College*	Mobile
Stillman College	Tuscaloosa
Troy State University	Troy
Tuskegee Institute	Tuskegee
University of Alabama	Birmingham
University of Alabama	Huntsville
University of Alabama	Tuscaloosa
University of Alabama	University
University of Montevallo	Montevallo
University of South Alabama	Mobile
ALASKA	
Anchorage Community College*	Anchorage
Kuskokwin Community College*	Bethel
University of Alaska	Juneau
ARIZONA	
Arizona State University	Tempe
Arizona Western College*	Yuma
Mesa Community College*	Mesa
Northern Arizona University	Flagstaff
Phoenix College*	Phoenix
University of Arizona	Tucson
ARKANSAS	
Arkansas Polytechnic College	Russellville
Ouachita Baptist University	Arkadelphia
Philander Smith College	Little Rock
University of Arkansas	Little Rock
University of Arkansas	Pine Bluff
University of Central Arkansas	Conway
CALIFORNIA	
Antelope Valley Community College*	Lancaster
California Polytechnic State University	Pomona
California Polytechnic State University	San Luis Obispo
California State College	Bakersfield
California State College	Dominguez Hills
California State College	Modesto
California State University	Chico
California State University	Davis
California State University	Fresno
California State University	Fullerton
California State University	Hayward
California State University	Long Beach
California State University	Los Angeles
California State University	Northridge
California State University	Sacramento
City College of San Francisco	San Francisco
Columbia Junior College*	Columbia
Fresno State College	Fresno
Golden State University	San Francisco
Humboldt State University	Arcata
Lone Mountain College	San Francisco
Los Angeles Trade Technical College*	Los Angeles
Loyola Marymount University	Los Angeles
Mesa Community College*	San Diego
Pasadena City College	Pasadena
Pepperdine University	Watts
Pomona College	Pomona
Sacramento City College	Sacramento
San Diego State University	San Diego
San Francisco State University	San Francisco
San Joaquin Delta College*	Stockton
San Jose State University	San Jose
Southwestern Community College*	Chula Vista
University of California	Berkeley
University of California	Davis
University of California	Los Angeles
University of California	San Diego
University of California	Santa Barbara
University of California	Santa Cruz
University of the Pacific	Stockton
University of Redlands	Redlands
University of San Francisco	San Francisco
University of Santa Clara	Santa Clara
University of Southern California	Los Angeles
Ventura Junior College*	Ventura
Victor Valley College*	Victorville
Whittier College	Whittier
COLORADO	
Colorado School of Mines	Golden
Colorado State University	Fort Collins
Community College of Denver*	Denver
Fort Lewis College	Durango
Metropolitan State College	Denver
Otero Junior College*	La Junta
University of Colorado	Boulder
University of Colorado	Colorado Springs
University of Colorado	Denver
University of Denver	Denver
University of Southern Colorado	Pueblo
CONNECTICUT	
Central Connecticut State College	New Britain
University of Bridgeport	Bridgeport
University of Hartford	West Hartford
University of New Haven	New Haven
DELAWARE	
Delaware State College	Dover
University of Delaware	Newark
DISTRICT OF COLUMBIA	
American University	
Benjamin Franklin University	
Catholic University	
Federal City College	
Gallaudet College	
Georgetown University	
George Washington University	
Howard University	
University of the District of Columbia	
Washington Technical Institute*	

*Two-year college

FLORIDA	
Bethune Cookman College	Daytona Beach
Brevard Community College*	Cocoa
Broward Community College*	Fort Lauderdale
Embry-Riddle Aeronautical University	Daytona Beach
Florida A & M University	Tallahassee
Florida Atlantic University	Boca Raton
Florida Institute of Technology	Melbourne
Florida International University	Miami
Florida State University	Tallahassee
Florida Technological University	Orlando
Miami-Dade Community College*	Miami
Okaloosa-Walton Junior College*	Niceville
University of Florida	Gainesville
University of Miami	Miami
University of North Florida	Jacksonvile
University of South Florida	Tampa
University of West Florida	Pensacola
GEORGIA	
Albany State College	Albany
Atlanta University	Atlanta
Augusta College	Augusta
Clark College	Atlanta
Emory University	Atlanta
Fort Valley State College	Fort Valley
Georgia College	Milledgeville
Georgia Institute of Technology	Atlanta
Georgia Southern College	Statesboro
Georgia State University	Atlanta
Morehouse College	Atlanta
Morris Brown College	Atlanta
Paine College	Augusta
Savannah State College	Savannah
Spelman College	Atlanta
University of Georgia	Athens
West Georgia College	Carrollton
HAWAII	
University of Hawaii	Honolulu
IDAHO	
Boise State College	Boise
College of Idaho	Caldwell
Idaho State University	Pocatello
Lewis-Clark State College	Lewiston
University of Idaho	Moscow
ILLINOIS	
Bradley University	Peoria
Chicago Kent College of Law	Chicago
Chicago State University	Chicago
DePaul University	Chicago
Eastern Illinois University	Charleston
Governors State University	Park Forest South
Illinois Benedictine College	Lisle
Illinois Institute of Technology	Chicago
Illinois State University	Normal
John Marshall Law School	Chicago
Loyola University	Chicago
Northwestern University	Evanston
Parkland College*	Champaign
Roosevelt University	Chicago
Sangamon State University	Springfield
Shawnee College	Ullin
Southern Illinois University	Carbondale
Southern Illinois University	Edwardsville
University of Illinois	Chicago
University of Illinois	Urbana
Western Illinois University	Macomb
INDIANA	
Indiana Institute of Technology	Fort Wayne
Indiana State University	Terre Haute
Indiana University	Bloomington
Indiana University	Gary
Indiana University	Indianapolis
Purdue University	Lafayette
Rose-Hulman Institute of Technology	Terre Haute
Tri-State University	Angola
University of Evansville	Evansville
Vincennes University*	Vincennes
IOWA	
Drake University	Des Moines
Graceland College	Lamoni
Iowa State University	Ames
St. Ambrose College	Davenport
University of Iowa	Iowa City
University of Northern Iowa	Cedar Falls
KANSAS	
Bethany College	Lindsborg
Friends University	Wichita
Kansas State University	Manhattan
McPherson College	McPherson
St. Mary College	Leavenworth
Tabor College	Hillsboro
University of Kansas	Kansas
Washburn University	Topeka
Wichita State University	Wichita
KENTUCKY	
Eastern Kentucky University	Richmond
Kentucky State University	Frankfort
Madisonville Community College*	Madison
Murray State University	Murray
University of Kentucky	Lexington
University of Louisville	Louisville
Western Kentucky University	Bowling Green
LOUISIANA	
Grambling State University	Grambling
Louisiana State University	Baton Rouge
Louisiana State University	Shreveport
Louisiana Technical University	Ruston
Loyola University	New Orleans
Nicholls State University	Thibodaux
Northeast Louisiana University	Monroe
Southeastern Louisiana University	Hammond
Southern University A & M College	Baton Rouge
Southern University	New Orleans
University of New Orleans	New Orleans
Xavier Community College*	New Orleans
Xavier University of Louisiana	New Orleans
MAINE	
University of Maine	Augusta
University of Maine	Orono
MARYLAND	
Anne Arundel College*	Anne Arundel
Bowie State College	Bowie
Catonsville Community College*	Catonsville
College of Notre Dame	Baltimore
Charles County Community College	La Plata
Choppins State College	Baltimore
Montgomery Community College*	Rockville
Morgan State College	Baltimore
Mount St. Mary's College	Emmitsburg
Prince George's Community College*	Largo
St. Mary's College of Maryland	St. Mary's City
Towson State University	Baltimore
University of Baltimore	Baltimore
University of Maryland	Baltimore
University of Maryland	College Park
University of Maryland, Eastern Shore	Princess Anne

*Two-year college

MASSACHUSETTS	
Bentley College	Waltham
Boston State College	Boston
Boston University	Boston
Curry College	Milton
Mass-Bay Community College*	Wellesley
Massachusetts Institute of Technology	Cambridge
Merrimack College	North Andover
North Adams State College	North Adams
Northeastern University	Boston
Tufts University	Boston
University of Lowell	Lowell
University of Massachusetts	Boston
MICHIGAN	
Central Michigan University	Mt. Pleasant
Detroit College of Business	Detroit
Detroit Institute of Technology	Detroit
Eastern Michigan University	Ypsilanti
Ferris State College	Big Rapids
Henry Ford Community College*	Dearborn
Mercy College	Detroit
Michigan State University	East Lansing
Michigan Technical University	Houghton
Oakland University	Rochester
Saginaw Valley State College	Saginaw
Schoolcraft Community College*	Livonia
University of Detroit	Detroit
University of Michigan	Ann Arbor
University of Michigan	Dearborn
Wayne State University	Detroit
Western Michigan University	Kalamazoo
MINNESOTA	
Bemidji State University	Bemidji
College of St. Catherine	St. Paul
College of St. Teresa	Winona
College of St. Thomas	St. Paul
Gustavus Adolphus College	St. Peter
Moorhead State College	Moorhead
University of Minnesota	Minneapolis-St. Paul
William Mitchell College	St. Paul
MISSISSIPPI	
Alcorn State University	Lorman
Hinds Junior College*	Raymond
Jackson State University	Jackson
Mississippi College	Clinton
Mississippi State University	Starkville
Mississippi State University	Mississippi State
Mississippi State College	State College
Mississippi Valley State University	Itta Bena
Rust College	Holly Springs
University of Mississippi	University
University of Southern Mississippi	Hattiesburg
MISSOURI	
Central Missouri State University	Warrensburg
Fontbonne College	St. Louis
Lincoln University	Jefferson City
Northeastern Missouri State University	Kirksville
Northwest Missouri State University	Maryville
Rockhurst College	Kansas City
School of the Ozarks	Point Lookout
St. Louis University	St. Louis
Stephens College	Columbia
University of Missouri	Columbia
University of Missouri	Kansas City
University of Missouri	Rolla
University of Missouri	St. Louis
Washington University	St. Louis
William Woods College	Fulton
MONTANA	
Carroll College	Helena
Eastern Montana College	Billings
Montana College of Mineral Science and Technology	Butte
Montana State University	Bozeman
Northern Montana College	Harve
University of Montana	Missoula
Western Montana College	Dillon
NEBRASKA	
Creighton University	Omaha
Kearney State College	Kearney
University of Nebraska	Lincoln
University of Nebraska	Omaha
NEVADA	
University of Nevada	Las Vegas
University of Nevada	Reno
NEW HAMPSHIRE	
New England Aeronautical Institute	Nashua
New Hampshire College	Manchester
University of New Hampshire	Durham
NEW JERSEY	
Brookdale Community College*	Lincroft
Burlington County College*	Pemberton
Cook College	New Brunswick
Jersey City State College	Jersey City
Montclair State College	Upper Montclair
Rutgers University	Camden
St. Peter's College	Jersey City
Somerset County College*	Somerville
Trenton State College	Trenton
William Paterson College	Wayne
NEW MEXICO	
College of Santa Fe	Santa Fe
Eastern New Mexico University	Portales
New Mexico Highlands University	Las Vegas
New Mexico State University	Albuquerque
New Mexico State University	Carlsbad
New Mexico State University	Las Cruces
University of Albuquerque	Albuquerque
University of New Mexico	Albuquerque
University of New Mexico	Las Cruces
NEW YORK	
Brooklyn College—CUNY	Brooklyn
Canisius College	Buffalo
City College of New York—CUNY	New York City
Cornell University	Ithaca
Corning Community College*	Corning
Elmira College	Elmira
Hunter College—CUNY	New York City
John Jay College of Criminal Justice	New York City
Long Island University	C.W. Post Center
Manhattan College	New York City
Marymount College	Tarrytown
Medgar Evers College—CUNY	Brooklyn
New York Institute of Technology	Old Westbury
New York University	New York City
Pace University	New York City
Pace University Westchester Campus	Pleasantville
Pratt Institute of Technology	Brooklyn
Rensselaer Polytechnic Institute	Troy
Rochester Institute of Technology	Rochester
Southhampton College (Long Island University)	Southampton
State University College	Fredonia

*Two-year college

State University of New York	Albany
State University of New York	Buffalo
State University of New York—College of Oswego	Oswego
State University of New York—College at Plattsburgh	Plattsburgh
State University of New York—Empire State College	Sarasota Springs
State University of New York	Syracuse
Union College	Schenectady
Vassar College	Poughkeepsie
Wagner College	Staten Island
Webb Institute	Glen Cove

NORTH CAROLINA

Appalachian College	Boone
Bennett College	Greensboro
Duke University	Durham
Durham College*	Durham
East Carolina University	Greenville
Elizabeth City State University	Elizabeth City
Fayetteville State University	Fayetteville
Johnson C. Smith University	Charlotte
Livingstone College	Salisbury
Meredith College	Raleigh
North Carolina A & T University	Greensboro
North Carolina Central University	Durham
North Carolina State University	Raleigh
Pfieffer College	Misenheimer
St. Augustine's College	Raleigh
Shaw University	Raleigh
Wake Forest University	Winston-Salem
University of North Carolina	Charlotte
University of North Carolina	Wilmington

NORTH DAKOTA

Mary College	Bismarck
North Dakota State University	Fargo

OHIO

Antioch College	Yellow Springs
Baldwin-Wallace College	Berea
Bowling Green State University	Bowling Green
Case Western Reserve University	Cleveland
Central State University	Wilberforce
Cleveland State University	Cleveland
Cuyahoga County Community College*	Parma Heights
Dyke College	Cleveland
John Carroll University	University Heights
Lorain County Community College*	Lorain
Malone College	Canton
Mount Union College	Alliance
Ohio College of Applied Science	Cincinnati
Ohio State University	Columbus
Sinclair Community College*	Dayton
University of Akron	Akron
University of Cincinnati	Cincinnati
University of Dayton	Dayton
University of Toledo	Toledo
Walsh College	Canton
Wilberforce University	Wilberforce
Wright State University	Dayton
Xavier University	Cincinnati
Youngstown State University	Youngstown

OKLAHOMA

Cameron University	Lawton
Central State University	Edmond
East Central Oklahoma State University	Ada
Langston University	Langston
Oklahoma City University	Oklahoma City
Oklahoma State University	Oklahoma City
Oklahoma State University	Stillwater
Phillips University	Enid
Southeastern Oklahoma State College	Durant
University of Oklahoma	Norman

OREGON

Lewis and Clark College	Portland
Oregon College of Education	Monmouth
Oregon Institute of Technology	Klamath Falls
Oregon State University	Corvallis
Portland Community College*	Portland
Portland State College	Portland
University of Oregon	Eugene
University of Portland	Portland

PENNSYLVANIA

Beaver College	Glenside
California State College	California
Chestnut Hill College	Chestnut Hill
Cheyney State College	Cheyney
Drexel University	Philadelphia
Duquesne University	Pittsburgh
Lasalle College	Philadelphia
Lehigh University	Bethlehem
Lincoln University	Lincoln University
Millersville State College	Millersville
Pennsylvania State University	University Park
Point Park College	Pittsburgh
St. Joseph's College	Philadelphia
Slippery Rock State College	Slippery Rock
Temple University	Philadelphia
University of Pittsburgh	Pittsburgh
Villanova University	Villanova
Widener College	Chester

RHODE ISLAND

Rhode Island College	Providence
Roger Williams College	Providence

SOUTH CAROLINA

Clemson University	Clemson
College of Charleston	Charleston
Furman University	Greenville
Morris College	Sumter
Newberry College	Newberry
South Carolina State College	Orangeburg
Trident Technical College*	Charleston
University of South Carolina	Columbia
Voorhees College	Denmark
Wofford College	Spartanburg

SOUTH DAKOTA

Augustana College	Sioux Falls
Blackhills State College	Spearfish
Northern State College	Aberdeen
Sioux Falls College	Sioux Falls
South Dakota State University	Brookings
University of South Dakota	Vermillion

TENNESSEE

Belmont College	Nashville
Christian Brothers College	Memphis
Cleveland State University College*	Memphis
East Tennessee State University	Johnson City
Fisk University	Nashville
Knoxville College	Knoxville
LeMoyne Owen College	Memphis
Memphis State University	Memphis
Middle Tennessee University	Murfreesboro
Shelby State Community College*	Memphis
Tennessee State University	Nashville
Tennessee Technological University	Cookeville
University of Tennessee	Knoxville
University of Tennessee	Martin
Vanderbilt University	Nashville

*Two-year college

TEXAS	
Angelo State University	San Angelo
Austin College	Sherman
Bishop College	Dallas
El Centro College*	Dallas
Huston-Tillotson College	Austin
Kilgore Junior College*	Kilgore
Lamar University	Beaumont
Laredo Junior College*	Laredo
North Texas State University	Denton
Our Lady of Lake College	San Antonio
Pan American University	Edinburg
Prairie View A & M University	Prairie View
St. Edward's University	Austin
St. Mary's University	San Antonio
St. Thomas University	Houston
Sam Houston State University	Huntsville
Southern Methodist University	Dallas
Southwestern University	Georgetown
Southwest Texas State University	San Marcos
Sul Ross State University	Alpine
Texas A & I University	Corpus Christi
Texas A & I University	Kingsville
Texas A & M University	College Station
Texas Eastern University	Tyler
Texas Southern University	Houston
Texas Technological University	Lubbock
Texas Woman's University	Denton
University of Houston	Houston
University of Texas	Arlington
University of Texas	Austin
University of Texas	El Paso
University of Texas	San Antonio

UTAH	
Brigham Young University	Provo
University of Utah	Salt Lake City
Utah State University	Logan
Weber State College	Ogden

VERMONT	
University of Vermont	Burlington

VIRGINIA	
Eastern Shore Community College*	Melfa
Germanna Community College*	Locust Grove
George Mason University	Fairfax
Hampton Institute	Hampton
Mary Washington College	Fredericksburg
Norfolk State College	Norfolk
Northern Virginia Community College*	Alexandria
Northern Virginia Community College*	Annandale
Northern Virginia Community College*	Manassas
Old Dominion University	Norfolk
Rappahannock Community College*	Glenns
St. Paul's College	Lawrenceville
Thomas Nelson Community College*	Hampton
University of Richmond	Richmond
University of Virginia	Charlottesville
University of Virginia—Clinch Valley College	Wise
Virginia Commonwealth University	Richmond
Virginia Polytechnic Institute and S.U.	Blacksburg
Virginia State College	Petersburg
Virginia Union University	Richmond

WASHINGTON	
Eastern Washington State College	Cheney
Evergreen State College	Olympia
Fort Wright College of Holy Names	Spokane
Pacific Lutheran University	Tacoma
Seattle Pacific College	Seattle
Seattle University	Seattle
University of Puget Sound	Tacoma
University of Washington	Seattle
Washington State University	Pullman
Western Washington State College	Bellingham

WEST VIRGINIA	
Alderson-Broaddus College	Philippi
West Virginia Institute of Technology	Montgomery
West Virginia University	Morgantown

WISCONSIN	
Beloit College	Beloit
Marquette University	Milwaukee
Northland College	Ashland
University of Wisconsin	La Crosse
University of Wisconsin	Madison
University of Wisconsin	Milwaukee
University of Wisconsin	Parkside
University of Wisconsin	Plattsville
University of Wisconsin	Stevens Point
University of Wisconsin	Whitewater

WYOMING	
University of Wyoming	Laramie

PANAMA	
University of Panama	Panama City
University of Santa Maria	La Antiqua

PUERTO RICO	
University of Puerto Rico	Mayaguez
University of Puerto Rico	San Juan

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*Two-year college

United States Civil Service Commission

Advance Limited 3/2/78
FPM Letter 308-10

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RETAIN UNTIL SUPERSEDED

Federal Personnel Manual System

FPM Letter 308-10

SUBJECT:

Cooperative Education for Nonbaccalaureate Students

Washington, D.C. 20415
March 13, 1978

Heads of Departments and Independent Establishments:

1. Executive Order 12015, dated October 26, 1977, broadens the provisions for noncompetitive conversion of student participants in career-related student employment programs. A copy of the new Executive order, which supersedes E.O. 11813, is attached to FPM Letter 308-9.

2. This FPM Letter transmits advance copies of subchapters 4 and 5 of FPM chapter 308. The new subchapter 4 provides revised guidelines under E.O. 12015 for Federal employment and conversion of cooperative education students in nonbaccalaureate curricula of 2-year community and junior colleges and technical institutes. The instructions in the new subchapter replace in full those contained in chapter 308, subchapter 4, issued March 1, 1976.

3. Subchapter 5 contains instructions regarding employment of high school cooperative education students, which were formally contained in subchapter 4. These instructions are essentially unchanged.

4. The most significant provision in the new subchapter 4 is the authority provided for noncompetitive conversion of associate degree graduates of 2-year colleges who have studied full time and have completed their cooperative education requirements in specified occupational series. The occupations have been selected because they provide a large, widespread and continuing or critical need for employees at the GS-4 level and consequently give promise of providing jobs for students when they graduate. The selected occupations also, in most instances, provide opportunity for promotion to grades beyond GS-4 so that incumbents are not dead-ended in occupational series at the grade 4 level.

5. Students meeting requirements for noncompetitive conversion as defined in the attached subchapter will be appointed under a new authority contained in section 213.3202(c) of Schedule B (see attachment 2 to FPM Letter 308-9). Associate degree co-op students who are not eligible for appointment under Schedule B will continue to be appointed under Schedule A, section 213.3102(g) or section 213.3102(q), as will high school co-op students. Baccalaureate students in 2-year colleges will continue to be appointed under Schedule B, section 213.3202(a) and subject to provisions of chapter 308, subchapter 2. (See attachment 3 for a ready guide to provisions in subchapter 4 which apply to employment of associate degree students under Schedule A and under Schedule B.)

6. Agencies should immediately document changes of appointing authorities for students currently employed by use of a Standard Form 50 or other approved means. As the PAC/Nature of Action for students appointed under Schedule B, section 213.3202(c), agencies should use code 553, Conversion to Excepted Appointment — Conditional.

In Item 39, "Remarks," the following should be inserted: "Per FPM Letter 308-10, 3/13/78, this action documents a change to a new appointing authority; it does not constitute a new appointment." The effective date of all such actions should be the date that the amended authorities became effective (12-20-77) or the date of first appointment if that was the later date.

Inquiries: Staffing Resources Division, Bureau of Recruiting and Examining, 632-5678

CSC Code: 308, Student Employment and Work-Study Programs

Distribution: FPM (Advance Edition Limited)

7. This FPM Letter provides authorization for a currently employed 2-year co-op student whose work experience was gained under Schedule A, sections 213.3102(q) or 213.3102(g) in an occupational series now approved for Schedule B appointment to be given credit for the experience for the purpose of meeting requirements for noncompetitive conversion. The experience under Schedule A, if part-time, must be computed on a full-time basis when crediting it as part of the 26 weeks required for noncompetitive conversion. The conversion should be documented under item 39 as follows: "Schedule A employment credited as Schedule B experience per FPM Letter 308-10".

8. In addition to provisions relating to new appointing authorities and conversion for students under Schedule B, subchapter 4 of chapter 308, contains other items to be noted. They are:

a. Limitations upon the allowable length of appointments (section 4-3c and d).

b. Updating of citizenship requirements for eligibility (section 4-4a).

c. Revision of requirements regarding scheduling of work and study periods (section 4-7b).

d. Information on crediting of work toward probation and career tenure (section 4-12).

e. Information on reduction-in-force tenure provisions (section 4-9).

f. Omission of reporting requirements. These will be published in a supplemental FPM letter.

9. Appropriate changes will be made in other related sections of the Federal Personnel Manual to bring them in line with new provisions of the attached chapter.

10. Agencies are responsible for assuring that all their concerned field offices are informed promptly of the new instructions so that any students employed will be appointed under the new provisions.

11. We would like to have a minimum of 6 months' experience with these instructions before making changes. Therefore, agencies are requested to withhold recommendations for additional occupational series to be authorized for appointment under Schedule B and other substantive changes during this period. Questions regarding the instructions or informal comments will be accepted at any time. They should be directed to the Office of Youth Employment Programs (202-632-5677).

Raymond Jacobson
Executive Director

Subchapter 4. Employment of Cooperative Education Students Pursuing Nonbaccalaureate Curricula in Two-Year Educational Institutions

4-1. PURPOSE

a. This subchapter provides instructions for Federal employment of cooperative education students who are working toward associate degrees in community and junior colleges or qualifying technical institutes.

b. Instructions governing employment of co-op students who are taking their first 2 years of baccalaureate study in a 2-year institution but who plan to transfer to a 4-year co-op college to complete a baccalaureate curriculum are contained in subchapter 2.

4-2. DEFINITIONS

a. As used in this subchapter:

(1) **Cooperative education** means a program for students who, in accordance with a cooperative education working agreement between the school and employer, receive instruction in an occupational field by combining periods of study with periods of study-related paid employment in a Federal agency.

(2) **Nonbaccalaureate cooperative education student** means a student who is studying full-time at a qualifying 2-year college or technical institute for the purpose of completing an associate degree and who has been accepted by the college in its cooperative education program and by a Federal agency for employment under the appointing authorities listed in section 4-3 below.

(3) **Qualifying college program** means a cooperative education program in a 2-year post secondary institution which:

a. Meets the specifications of the Commission's **Handbook X-118, Part II, Section III, Crediting Education,** and

b. Has a cooperative education program in one or more designed curriculum areas which has appropriate administrative and faculty support: fosters a close relationship between study and work; has designated staff to coordinate the program; schedules work for other than summer or vacation periods alone; has placed or plans to place more than one student in the Federal Government; and will sign and support a working agreement with the employing Federal agency.

4-3. APPOINTMENTS

a. **Excepted service.** Students must be appointed in the excepted service.

b. **Authorities.** The appointing authorities for the program are:

(1) Schedule B, section 213.3202(c), (see FPM chapter 213, appendix D, or FPM Letter 308-9, attachment 2), for cooperative education students who are studying full time in pursuit of an associate degree in a qualifying college **and** who are employed in one of the following occupational series during their co-op work periods **and** who are majoring in fields directly related to the occupation.

GS-312	Clerk Stenographer and Reporter
GS-318	Secretary
GS-404	Biological Technician
GS-525	Accounting Technician
GS-647	Medical Radiology Technician
GS-649	Medical Machine Technician
GS-699	Health Aid and Technician
GS-802	Engineering Technician
GS-962	Contact Representative
GS-1311	Physical Science Technician

These series were selected primarily because they are occupational areas in which there is a continuously high or critical need which is geographically widespread and in more than one Federal agency, and because they are occupational areas for which many 2-year colleges have preparatory curricula. As such they offer the best opportunities for pregraduate and postgraduate placement and for productive use of Federal monies.

(2) Schedule A, section 213.3102(g) or (q), for employment of all 2-year associate degree co-op students who do not qualify for appointment under Schedule B as defined in (1) above. Clerical workers and those in the trades and crafts are appointed under section 213.3102(g), (except for those positions listed in b(1) of this section).

c. **Length of appointments.** The following instructions apply in determining the length of appointments:

(1) Appointments of students under Schedule B (see b(1) above) must be for the full period beginning on the date of first appointment and ending at the close of business of the 120th day after graduation. If graduation exercises are delayed more than 15 days after the student completes his academic requirements, the 15th day after the completion of these requirements will be considered the graduation date and the beginning of the 120-day period.

(2) Appointments of all 2-year college students under Schedule A are made for the duration of the work periods only (see section 4-7) for information on work periods).

(3) No appointment under Schedule A or B will permit a student to be in employee status for more than 2½ years (not including the period allowed after graduation under Schedule B).

d. **Nature and type of appointments** are subject to the following provisions:

(1) Students under Schedule B, section 213.3202(c), are given **excepted conditional** appointments and work is scheduled on a 40-hour-a-week basis for the full length of each work period unless a waiver is granted by the Commission for part-time work. Such a waiver will be granted only on the basis of factors relating to the continuing demands of the work assignments or work situation rather than the preferences of the agency or the preferences or needs of student employees. Permission to schedule work on a part-time basis will be granted only when the students can continue their studies on a schedule that will meet the 2½-year limitation upon the appointment (see c(3) above). Exceptions will be granted only to the headquarters of an agency and with the understanding that the agency thereafter will determine where and when it will be applicable within the agency.

(2) Students under Schedule A will be given excepted not-to-exceed appointments. Work may be full time (40 hours a week) or part time on alternating half days, days or any other schedule not involving in excess of 40 hours in any 1 week. The total length of appointments within any 12-month period for any one student will not exceed 1040 hours.

4-4. GENERAL ELIGIBILITY REQUIREMENTS

a. **Citizenship.** All students appointed under Schedule B must be citizens of the United States or natives of American Samoa or Swains Island. Students under Schedule A appointments need not be citizens of the United States unless citizenship is required by agency regulations or by appropriations acts. Any noncitizens, however, must have been lawfully admitted to the United States for permanent residence.

b. **Family relationships.** All students appointed under Schedule B, section 213.3202(c) are subject to both the members-of-family (FPM chapter 338) and the sons and daughters restriction. Co-op students under Schedule A appointments listed in this subchapter are subject to only the sons and daughters restriction (see FPM chapter 338 and appendix G of FPM chapter 213).

c. **Age.** Students must be at least 16 years of age.

d. **High school graduation.** Co-op students appointed under Schedule B programs must be graduated from high school.

e. **School affiliation.** All students under co-op appointments must be in full-time attendance at the educational institution (usually 12 hours per semester or the equivalent); must be enrolled in a qualifying cooperative education program; and must be recommended for employment by the appropriate officials at the educational institutions.

4-5. POSITION CLASSIFICATION AND REQUIRED QUALIFICATIONS

a. **Classification of positions.** The positions to which students are assigned are those at grades GS-2 and GS-3 or comparable wage grades, irrespective of any prior work experience which the student may have had which would qualify him for a higher grade.

b. **Qualifications.** Agencies will apply the education and experience requirements (but not test requirements) contained in the General Student Trainee Series, GS-099, to all positions in cooperative education programs covered by these instructions regardless of the classification series of the position. (See Handbook X-118).

4-6. SELECTION AND RETENTION

a. **Responsibility.** Agencies have final responsibility for selection of students and for determining that selection is made in accordance with all provisions of FPM chapter 302 which are not at variance with the provisions of this chapter. Special care should be taken in selection of students to avoid later turnover costs and discouragement on the part of the school and student. Eligibility requirements should be carefully reviewed prior to commitment.

b. **Basis for selection.** Selections are based upon assessment of an agency's need and the individual's apparent capacity to meet that need. Financial need or other hardship is not to be used to give advantage in selection for cooperative education programs.

c. **Equal employment opportunity.** Selection of students is subject to all laws and policies governing equal employment opportunity. All co-op positions must be open to all eligible persons.

d. **Retention.** A Schedule B student must maintain a grade of C at all times in the major subject and courses required for qualification at the GS-4 level after graduation and must also maintain either an average equivalent to 2.0 on a 4.0 scale or the average required by the college for an associate degree.

4-7. WORK PERIODS AND ASSIGNMENTS

a. **Relationship of work to study.** A student's work assignments must be closely related to his or her major fields of study.

b. **Work periods.** The number of work periods will be determined by the agency in cooperation with the school, subject to the following requirements:

(1) No student under either Schedule A or Schedule B will work in excess of 1040 hours in the agency's cooperative education program in any 12-month period. Students under Schedule B are not to be given other appointments in the same agency.

(2) For students under Schedule B, each work period should, when possible, total at least 60 calendar days in length and will usually correspond to a semester or quarter.

(3) Periods for students under Schedule B will be planned so that the student will meet requirements for noncompetitive conversion prior to graduation (see section 4-11).

(4) For students under both Schedule A and Schedule B, work must not be scheduled wholly during summer periods or school vacation periods.

(5) Periods for all students must be planned so that the limitation of 2½ years in student status is met (see section 4-3c(3)).

(6) All students must work on a schedule planned in advance rather than on an intermittent or when-needed basis.

(7) A student is eligible for promotion to GS-3 after 1 year of study and should generally be promoted if his performance meets requirements.

c. **Restriction on type of work.** Students under 18 years of age are subject to the same restrictions on hazardous occupations as those determined by the Secretary of Labor under the Fair Labor Standards Act. (See list in attachment 4 to this Letter.)

d. **Hours of work and study.** A student is subject to the following:

(1) Overtime work should not be required or permitted except where unusual circumstances relating specifically to workload or time frames make it necessary.

(2) Students are not permitted to take college courses during planned work hours. Full-time classroom study should not be carried while the student is working full time.

4-8. COMPENSATION AND CEILINGS

a. **Pay.** Students will be paid in accordance with civil service pay schedules. While overtime work is allowed only in special circumstances (see section 4-7d), a student who works overtime must receive overtime pay unless he/she elects compensatory time.

b. **Retirement.** Students under Schedule B appointments will be covered by the retirement system (see FMP Supplement 831-1, subchapter 2, for requirements). Students under Schedule A are not eligible for retirement. Students not under retirement coverage are subject to FICA provisions.

c. **Life and health insurance.** Students under Schedule B who are expected to be in a pay status for at least one-third of the total period of time from the date of the first appointment to the completion of the cooperative work-study program **and** who are serving under appointments not limited to 1 year or less, or under part-time appointments with a pre-arranged regularly scheduled tour of duty, automatically have regular health and regular life insurance coverage (unless it is waived by the student). These students must also be granted an opportunity to elect the additional amounts of optional insurance available under the insurance plan. The first day of the first work period will be considered the beginning of the co-op enrollment period, which will end on the day the student's appointment is terminated. Students under Schedule A are not eligible for health and life insurance benefits.

d. **Leave.** Students will earn and use sick leave and annual leave in accordance with the provisions of FPM chapter 630. Students are entitled to holidays listed in FPM chapter 610 and will be paid for holiday time in accordance with civil service rules and regulations governing career staff.

e. **Payments of expenses.** Payment of travel to the first co-op duty station for any student is subject to the provisions of FPM chapter 571, but it is anticipated that such payment generally will not be necessary or advisable.

f. **Ceilings.** Arrangements can be made for more than one student to occupy a single position but not at the same time. Schedule B co-op students can be counted and reported by an agency under either the derived ceiling or the permanent ceiling or an agency can count some under each. Schedule A students must be counted under derived ceiling.

4-9. REDUCTION IN FORCE, DROPOUT, REAPPOINTMENT

a. **Tenure group.** Students under Schedule B are in tenure group II in the excepted service. All other 2-year students are in group 0.

b. **Dropout.** Students who drop out of the college's co-op program, or discontinue their education, or do not complete work periods must be terminated. Where discontinuance of participation is not based upon poor scholarship, poor job performance or other disqualifying factors, students may, at the agency's option, be reappointed if they are part of the college's cooperative education program at the time of reappointment.

c. **Reappointment.** A student who has previously participated in a postsecondary cooperative education program in the Federal Government and received an associate degree cannot be appointed again as a cooperative education student if he returns for further schooling in a 2-year college.

4-10. PERFORMANCE APPRAISAL, PROMOTION AND TERMINATION

a. **Initial performance review.** Prior to the end of the first work period of sufficient duration, the supervisor, preferably with at least one other staff member who has worked with the student, must review the student's performance, rating him or her on the following items.

(1) Competence with which assigned tasks were performed.

(2) Extent to which tasks were completed on time when the student had control over the time factor.

(3) Ability to accept and follow directions and adhere to established regulations.

(4) Ability to win the respect and confidence of others in the performance of assigned tasks.

(5) Ability to take initiative in assigned tasks.

(6) Physical fitness to perform the job adequately.

(7) Competence in at least three specific skills, knowledge or abilities identified as being important to the target career job. Typical skills might be writing, marking oral presentations, handling figures, making decisions, assembling documentation, etc. If the assigned tasks did not allow for observation of some of the identified areas of competence, this fact should be noted in the record as an aid to the planning of future assignments.

b. **Discussion of review with student.** Following the review, a conference is held with the student to:

(1) Get the student's reactions, and learn of factors that may have affected performance.

(2) Consider approaches to performance improvement if necessary. Comments should include strengths as well as weaknesses regarding performance.

(3) Encourage the interest of the student in future employment with the agency.

(4) Indicate to the student that notice will be sent to him and to the school regarding future work periods.

c. **Recommended retention or release.** On the basis of the rating of the student's job performance, interest, fitness and conduct, the supervisor will transmit to the appropriate authority within the agency either of the following:

(1) A recommendation for retention of the student, with an indication of whether promotion is indicated.

(2) A recommendation that the student not return for another work period, together with a well documented statement of reasons for his release which is as closely work-related as possible.

d. **Notification of decision.** A student's retention or release must be determined by the appropriate agency authority. Both the student and the college program coordinator must be notified as promptly as possible. In the case of termination, a carefully worded report of reasons should be provided to both parties.

4-11. EMPLOYMENT AFTER GRADUATION

a. Excepted co-op appointments under Schedule B for 2-year students may be noncompetitively converted to appointments on the career staff at GS-4 only. Eligibility requirements for such conversion are as follows:

(1) The student has successfully completed all requirements for an associate degree in the area in which he or she completed his or her co-op work. A statement from the school which indicates completion is acceptable in place of a diploma.

(2) The student meets all qualification standards for the position which he or she will enter, except for test requirements.

(3) The student has completed before graduation **in the agency recommending his conversion** one or more work periods totaling 26 weeks (1040 hours) of full-time cooperative education experience in pay status (or the equivalent in part-time work if the Commission has approved a part-time arrangement), all in an occupational series which was approved for Schedule B appointment prior to the student's graduation date. Working hours are computed in accordance with FPM chapter 302, section 1-4. Any part-time work experience gained under Schedule A as a co-op student prior to the approval of the occupational series for noncompetitive conversion must be computed on the basis of full-time employment in figuring the 26 weeks required.

(4) The student meets the citizenship and members-of-family requirements **at the time of conversion.**

(5) The student is converted by the 120th day in accordance with all provisions of E.O. 12015.

b. All Schedule A students should be terminated at the end of the last work period, which should be prior to graduation.

c. All Schedule B students should be terminated or converted as soon as possible and in all cases by the 120th day after graduation.

d. All students should be advised of their right to compete through examination for placement after graduation in the career service at any entry level for which they qualify, in either the same or another occupation and in either the same or another agency.

4-12. CREDIT TOWARD PROBATION AND CAREER TENURE

a. **Probation.** For students under Schedule B only, cooperative education may be credited toward the 1-year probationary period required of persons converted under Executive Order 12015 if they meet the conditions specified in FPM Supplement 296-31, appendix B, subchapter 315A. One of these conditions is that all prior service was in the same agency and the same line of work to which the person is converted. "The same line of work" means that the academic study and work experience together must testify to possession of all knowledges and skills required for the position to which the person is converted.

b. **Career tenure.** For Schedule B students only, cooperative education may be counted toward career tenure as provided for in FPM Supplement 296-31, appendix B, subchapter S315B a(1)(j).

4-13. WORKING ARRANGEMENTS

a. **Working agreements.** It is the responsibility of each agency employing students under the provisions of this subchapter to assure that there is a written working agreement between the agency and the college and that a copy of the agreement is sent to the staffing division of the Commission's regional office with jurisdiction over the location of the installation involved. In the greater Washington, D.C., jurisdiction, copies are to be sent to the Manager of the Washington Area Office. Each agreement must:

(1) Be renegotiated if there have been no students from the college employed during the previous 12 months and there are no immediate plans for placement.

(2) Contain the following items:

a. A statement of agency responsibilities for appointment of a liaison, for selecting and processing appointees, for orienting students, for informing the college of each student's progress, and for notifying the college of intent to release.

b. A statement of the college's responsibilities for appointment of a liaison, for referring candidates (including all honorably discharged veterans who ask to be referred), for providing data on each student, and for notifying the agency of a change in a student's status.

c. Student eligibility requirements, including those relating to college enrollment, **sons and daughters restriction,** required academic standing, and, for Schedule B students, the members-of-family requirement.

d. A statement regarding pay and paid benefits and about leave and holiday provisions.

e. Conditions governing classification, promotion, performance, appraisal and termination.

f. Required work schedule, including length of periods, summer restriction and leave-without-pay provisions if any.

g. Equal employment opportunity statement.

h. Conditions governing conversion of Schedule B students if applicable.

i. Conditions required for change in agreement.

j. Signatures of agency and college representatives and effective date.

4-14. PROGRAM IMPLEMENTATION AND EVALUATION

a. **Implementation.**

(1) Each agency must designate members of its staff (preferably its personnel staff) in its central and major subordinate organizations to keep currently informed on cooperative education for 2-year students and high school students. Generally, this responsibility is assigned to the persons who have responsibility for cooperative education for baccalaureate students.

(2) Each activity employing students should designate a person to carry primary responsibility for the program and to serve as liaison with officials of educational institutions.

(3) At all Federal locations where students are employed, there should be active, continuing work relationships with appropriate representatives of the educational institutions concerned. Except when otherwise indicated by the school, the director of cooperative education should be regarded as the official point of contact and liaison with Federal agency staff.

(4) Coverage of cooperative education should be included in public information and public relations activities of agencies whenever appropriate.

b. **Evaluation.** Each agency head has responsibility for periodic review and evaluation of all cooperative education activity under his or her direction. Such a review should form the basis for establishing future objectives and budget provisions. The review should include:

(1) Assessment of the program in terms of its compliance with the requirements of this FPM chapter.

(2) Evaluation of the program in terms of the agency's own staffing goals and needs.

(3) Determination of the program's effectiveness compared to the potential effectiveness of other available staffing methods and programs, including, where possible, an analysis of cost effectiveness.

Attachment 2 to FPM Ltr. No. 308-10

Subchapter 5. Employment of Cooperative Education Students in High Schools

5-1. PURPOSE

a. This subchapter provides instructions for appointment of cooperative education students who are in high schools or in other qualifying institutions for the education of students at grades 9 or above and through 12 (which will hereafter be called high schools).

5-2. DEFINITIONS

a. As used in this subchapter:

(1) **Cooperative education** means a program for students who, in accordance with a cooperative education agreement between the school and the employer, receive instruction in an occupational field by combining periods of study with periods of related paid employment in a Federal agency.

(2) **High school cooperative education student** refers to a student who is studying full time for the purpose of earning a high school diploma and who has been accepted by the school in a qualifying cooperative education program and employed by a Federal agency under appointing authorities listed in section 5-4 below.

(3) **Qualifying high school program** means a vocational cooperative education program which either may be State-approved and State-operated with support from Federal funds provided under Public Law 90-576 or may be administered by the school itself, with or without public funding, and which also:

a. has the support of administrators and teachers;

b. fosters a close relationship between work and study;

c. has designated persons to coordinate the program;

d. schedules work for other than vacation periods alone;

e. has placed or plans to place more than one student in a Federal job;

f. will sign and support a working agreement with a Federal agency.

5-3. APPOINTMENTS

a. **Excepted service.** Students must be appointed in the excepted service.

b. **Authorities.** The following are the appointing authorities for the program:

(1) Schedule A, section 213.3102(g) for part-time employment of students pursuing careers in the office skills or the trades and crafts. (Notwithstanding provisions of PM chapter 213, appendix C-1g, appointments in the Metropolitan Washington area do not require prior approval by the Commission.)

(2) Schedule A, section 213.3102(q), for employment of students in paraprofessional and technical positions in the GS series

c. **Length of appointment.** Appointments are made for the period of the work assignment. Total time worked must not exceed 1040 hours in any 12-month period.

d. **Nature of appointment.** The appointment may be full time or part time. Intermittent employment is not appropriate. The proper appointment action on form 50 for high school students is "excepted NTE [the last day of the duty assignment]."

5-4. GENERAL ELIGIBILITY REQUIREMENTS

a. **Citizenship.** Students under Schedule A appointing authorities need not be citizens of the United States unless citizenship restriction is required by an agency's regulations or by appropriations acts. They must have been lawfully admitted to the USA.

b. **Family relationships.** Students are subject to the sons-and-daughters restriction. (See FPM chapter 338 and appendix G of FPM chapter 213.)

c. **Age.** Students must be at least 16 years of age.

d. **School affiliation.** Students must be enrolled in a qualifying cooperative education program and must be recommended by appropriate officials at the educational institutions.

5-5. POSITION CLASSIFICATION AND REQUIRED QUALIFICATIONS

a. **Classification of Positions.** The positions to which students are assigned are those at the GS-1 level or the wage grade equivalent, irrespective of prior experience which the student may have had which would qualify him for a higher grade.

b. **Qualifications.** Students must meet the education and experience standards (but not test requirements) applicable to persons applying for the same positions through the competitive service at the same grade.

5-6. SELECTION AND RETENTION

a. **Responsibility.** Agencies have final responsibility for selection of students and for determining that all selections are made in accordance with all provisions of FPM chapter 302 which are not at variance with this chapter. Eligibility standards should be carefully reviewed prior to commitment.

b. **Basis for selection.** Selections are based upon assessment of agency need and the individual's apparent capacity to meet that need. An individual's financial need is not to be used to give advantage to students in selection for cooperative education programs.

c. **Equal employment opportunity.** Selection of students is subject to all laws, regulations and policies governing equal employment opportunity. All co-op positions should be open to all eligible persons.

d. **Retention.** All students must maintain grades predictive of graduation from high school. Low academic standing is a reasonable cause for terminating a student's work experience.

5-7. WORK PERIODS AND ASSIGNMENTS

a. **Related work and study.** A student's work assignments must be related to his or her field of study.

b. **Work periods.** The number of work periods will be determined by the agency in cooperation with the school, subject to the following requirements:

(1) Scheduling of work periods during school terms is preferable. In no case must all periods be scheduled during summers or school vacation periods.

(2) Work periods should not be planned so that they delay a student's graduation date.

(3) All students must work on a schedule planned in advance rather than on an intermittent or "when needed" basis.

(4) No student will work more than 1040 hours in the agency's cooperative education program in any 12-month period.

c. **Restriction on type of work.** Students under 18 years of age are subject to the same restrictions on hazardous occupations as those determined by the Secretary of Labor under the authority of the Fair Labor Standards Act. (See attachment 4.)

d. **Restriction on work and study.** A student's work (or his work and classroom attendance together) should not generally exceed 40 hours in any one week.

5-8. COMPENSATION AND CEILINGS

a. **Pay.** Students will be paid in accordance with regular pay schedules. While overtime work should be allowed only in unusual circumstances, a student who works overtime must receive overtime pay unless he/she elects to take compensatory time.

b. **Retirement.** High school students are not eligible for Federal retirement coverage. They must be covered by FICA in accordance with Social Security requirements.

c. **Other benefits.** High school students are not eligible for coverage under Federal health and life insurance benefits.

d. **Leave.** Students will earn and use sick leave and annual leave in accordance with the provisions of FPM chapter 630. They will be given and paid for holidays in accordance with FPM chapter 610, subchapter 2, and FPM Supplement 990-2, subchapter S1.

e. **Payment of expenses.** Irrespective of any provisions of FPM chapter 410 and 571, agencies are not authorized to pay travel or study-related expenses for high school students.

f. **Ceilings.** Agencies can arrange for more than one student to occupy a single position. Employment is charged against derived ceilings.

5-9. REDUCTION IN FORCE, DROPOUT AND REAPPOINTMENT

a. **Tenure group.** Students are in tenure group 0 for reduction-in-force purposes.

b. **Dropout.** A student who drops out of the high school's cooperative education curriculum must be terminated from the program.

5-10. PERFORMANCE APPRAISAL, TERMINATION AND PROMOTION

a. **Initial performance review.** Prior to the end of the first work period of sufficient duration, the supervisor, preferably with at least one other staff member who has worked with the student, must review the student's performance, rating him or her on the following items.

(1) Competence with which assigned tasks were performed.

(2) Extent to which tasks were completed on time when the student had control over the time factor.

(3) Ability to accept and follow directions and adhere to established regulations.

(4) Ability to win the respect and confidence of others in the performance of assigned tasks.

(5) Demonstration of initiative in assigned tasks.

(6) Physical fitness to perform the job adequately.

(7) Identification of at least three specific skills, knowledge or abilities identified as being important to the target career job. If the assigned tasks did not allow for observation of some of the identified areas of competence, this fact should be noted in the record as an aid to the planning of future assignments.

b. **Discussion of review with student.** Following the review, a conference is held with the student to:

(1) Get the student's reactions, and learn of factors that may have affected performance.

(2) Consider approaches to performance improvement if necessary. Comments should include strengths as well as weaknesses regarding performance.

(3) Determine the interest of the student in future employment with the agency.

(4) Indicate to the student that notice will be sent to her or him and to the school regarding acceptance for future work periods.

c. **Recommended retention or release.** On the basis of the rating of the student's job performance, interest, fitness and conduct, the supervisor will transmit to the appropriate authority within the agency either of the following:

(1) A recommendation for retention of the student, with an indication of whether promotion is indicated.

(2) A recommendation that the student not return for another work period, together with a well documented, factual statement of reasons for release. Except in unusual circumstances, the reasons stated should be in terms of his fitness for his or her assignment or like assignments.

d. **Notification of decision.** When the student's retention or release is determined by the appropriate authority, both the student and the program coordinator shall be notified as promptly as possible. In the case of a release, a properly considered report of reasons should be provided to both parties.

5-11. WORKING ARRANGEMENTS

a. **State-regulated programs.** Whenever a school's program is subject to State vocational education regulations and criteria, agencies must try to meet the State requirements to the extent that they are not in conflict with the provisions of this subchapter or with other civil service regulations. Under no circumstances are agencies to accept reimbursement of funds that may be available to employers under State-operated vocational education programs.

b. **Working agreements.** The agency must have a written memorandum of understanding with each school. Each agreement should be dated and should contain at least the following items:

(1) A statement of the agency's responsibilities for appointment of a liaison, for orienting students, for informing the school of the student's performance and for notifying the school of any intent to release.

(2) A statement of the school's responsibilities for appointment of a liaison, for referring candidates, for providing data on students, and for notifying the agency of a change in student status.

(3) A statement of basic eligibility requirements, including age.

(4) A statement about pay and Social Security deductions and about leave and holiday provisions.

(5) Statements regarding grade and performance appraisal.

(6) Information about work schedules.

(7) An equal employment opportunity statement, indicating that all jobs are open to all students.

(8) Conditions required for a change in agreement — i.e. prior discussion and mutual consent (provided changes are in line with Federal regulations and policies).

5-12. PROGRAM EVALUATION AND REPORTS

a. **Evaluation process.** Each agency has responsibility for periodic review and evaluation of employment of cooperative education students in high schools. The review should include an assessment of the program in terms of the provisions of this FPM chapter and of the agency's staffing goals and needs.

b. **Program planning.** The review and evaluation should provide a basis for establishing future objectives for the program.

c. **Reports.** While the Civil Service Commission requires no regular report on high school cooperative education, agencies are urged to instruct headquarters and field offices to furnish information that will enable an agency to provide figures on the total employment of high school cooperative education students if a request is received by the agency from any source.

APPENDIX A. OCCUPATIONS DECLARED HAZARDOUS

Persons under 18 must not be employed in the following types of occupations which the Secretary of Labor has found and declared to be hazardous or detrimental to the health and well-being of young people under 18:

(1) Occupations in or about plants or establishments manufacturing or storing explosives or articles containing explosive components.

(2) Occupations of motor-vehicle driver and outside helper.

(3) Coal-mine occupations.

(4) Logging occupations and occupations in the operation of any sawmill, lath mill, shingle mill, or cooperate-stock mill.

(5) Occupations involved in the operation of power-driven woodworking machines.

(6) Occupations involving exposure to radioactive substances and to ionizing radiations.

(7) Occupations involved in the operation of elevators and other power-driven hoisting apparatus.

(8) Occupations involved in the operation of power-driven metal forming, punching, and shearing machines.

(9) Occupations in connection with mining, other than coal.

(10) Occupations involving slaughtering, meat-packing or processing, or rendering.

(11) Occupations involved in the operation of certain power-driven bakery machines.

(12) Occupations involved in the operation of certain power-driven paper-products machines.

(13) Occupations involved in the manufacture of brick, tile, and kindred products.

(14) Occupations involved in the operation of circular saws, band saws, and guillotine shears.

(15) Occupations involved in wrecking, demolition, and ship-breaking operations.

(16) Occupations involved in roofing operations.

(17) Occupations in excavation operations.

Information about specific occupations and assignments which fall within the above listing can be obtained from the U.S. Civil Service Commission.

FEDERAL AGENCIES PARTICIPATING IN COOPERATIVE EDUCATION PROGRAMS FOR COLLEGE STUDENTS

(As of April 1978)

DEPARTMENT OR AGENCY	CONTACT PERSON (Hdqtrs. Level)
Department of Agriculture	Ms. Patricia Killen Office of Personnel (C & MPD) Department of Agriculture Washington, D.C. 20250 (202) 447-2435
Department of the Air Force	Mr. Henry Strom Chief, Training and Development Directorate of Civilian Personnel Headquarters, U.S. Air Force Washington, D.C. 20314 (202) OX3-5278
Department of the Army	Mr. Herman Abramson Department of the Army Career Management Field Agency Forrestal Building, Room 4A091 1000 Independence Ave., S.W. Washington, D.C. 21314 (202) 693-1770/1771

Department of Commerce	Mr. Carris House Office of Personnel Department of Commerce Washington, D.C. 20230 (202) 377-4861
	Ms. Nadine Doxey, AD451-Rm. 217 Office of Personnel National Oceanic and Atmospheric Administration 6001 Executive Boulevard Rockville, MD 20852
Department of Health, Education and Welfare	Dr. Marguerite Mazique Office of the Secretary, HEW 330 Independence Avenue, S.W. Washington, D.C. 20201 (202) 245-2030
	Mr. Michael Herlihy Personnel and Training Division Room 1087 Office of Education Department of Health, Education and Welfare 400 Maryland Avenue, S.W. Washington, D.C. 20202 (202) 245-8284
	Mr. Kenneth Taylor Social Security Administration, G-204 West Highrise 6401 Security Boulevard Baltimore, MD 21235
	Ms. Patricia Sykes Division of Personnel Management Food and Drug Administration (HFA440) 5600 Fishers Lane Rockville, MD 20856 (301) 443-1755
	Mr. G. W. Robinson Personnel Staffing Branch National Institutes of Health Building 31, Room B3C12 9000 Rockville Pike Bethesda, MD 20014
Department of the Interior	Mr. Larry M. Lane Division of Employment and Position Management Department of the Interior 18th & C Streets, N.W. Washington, D.C. 20240 (202) 343-3364
Department of Justice	Ms. Mary Moore Personnel Management Specialist Personnel and Training Staff Department of Justice, Room 1337 Washington, D.C. 20530 (202) 739-5245
Department of Labor	Ms. Julia Lillard Office of Personnel Office of the Assistant Secretary for Administration Department of Labor, Room 6138 Washington, D.C. 20210 (202) 523-6557
Department of the Navy	Mr. Peter Crowley Head, Recruitment and Special Programs Section OCP262 Department of the Navy Washington, D.C. 20390 (202) 694-4062

Department of Housing and Urban Development	Ms. Barbara Robinson Personnel Management Specialist 451 7th St., S.W., Room 2180 Department of HUD Washington, D.C. 20410 (202) 755-5492
Department of Transportation	Mr. Richard Alfultis Director, Personnel & Training Office, Secretary of Transportation Washington, D.C. 20590 (202) 426-4088
	Federal Aviation Admin. (APT 205) 800 Independence Ave., S.W., Rm. 526 Washington, D.C. 20591 (202) 426-3437
	Mr. Alfred Clinkscales Office of Personnel and Training Federal Highway Administration 400 7th Street, S.W., Room 4328 Washington, D.C. 20590 (202) 426-0547
	Mr. Kenneth Valentine Commandant — GPC/62 U.S. Coast Guard Headquarters 400 7th Street, S.W. Washington, D.C. 20590 (202) 426-0922
Department of the Treasury	Mr. Frank Gorman Employment Branch Internal Revenue Service, Room 1508 1111 Constitution Avenue, N.W. Washington, D.C. 20224 (202) 566-6431
Central Intelligence Agency	Mr. Robert Bell PO Box 9312 Central Intelligence Agency Rosslyn Station Arlington, VA 22209 (202) 351-2028
Defense Communications Agency	Mrs. Alicia Czar Personnel Management Specialist Defense Communications Agency 8th & S. Courthouse Road Arlington, VA 22204 (202) 692-2783
Defense Logistics Agency	Mr. Harold Turney Employment and Pay Management Division Office of Civilian Personnel Defense Logistics Agency Headquarters Cameron Station (DSAH-KE) Alexandria, VA 22314 (202) 274-6030
Environmental Protection Agency	Mrs. Amy Kearns Personnel Management Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460 (202) 755-2922
Equal Employment Opportunity Commission	Ms. Joan Frazier Chief of Employee Development Equal Employment Opportunity Commission Washington, D.C. 20506 (202) 634-6782

Farm Credit Administration	Mr. Michael E. Hotz Assistant Director of Personnel Farm Credit Administration 485 L'Enfant Plaza W., S.W. Washington, D.C. 20578 (202) 755-4130
Federal Trade Commission	Mr. Kenneth Hunter Personnel Staffing Specialist Federal Trade Commission 6th & Pennsylvania Ave., N.W. Washington, D.C. 20580 (202) 523-3390
Federal Deposit Insurance Corporation	Mr. Jack C. Pleasant FDIC — Room 800 Washington, D.C. 20420 (202) 393-8400
General Accounting Office	Ms. Nancy Jo Weiner Office of Personnel Management General Accounting Office 441 G St., N.W., Room 7536 Washington, D.C. 20548 (202) 275-6185
General Services Administration	Mr. David C. Rupp General Services Administration 18th & F Sts., N.W., Room 6226 Washington, D.C. 20405 (202) 566-1335
National Aeronautics and Space	Mrs. Linda Sampson Program Management Division (NPM28) NASA Headquarters Washington, D.C. 20546 (202) 755-3412
National Labor Relations Board	Mr. James Anthony Personnel Office, Room 300 National Labor Relations Board 2727 Pennsylvania Avenue, N.W. Washington, D.C. 20570 (202) 254-9044
National Security Agency	Mr. Charles Raduazo National Security Agency (Attn. 321) Fort George G. Meade, MD 20755 (301) 796-6161
Securities and Exchange Commission	Ms. Frances Phelps Securities and Exchange Commission 500 N. Capitol St., N.W., Room 750 Washington, D.C. 20549 (202) 755-1322
Small Business Administration	Mrs. Marion Hupp Ass't. Chief, Employment Division Small Business Adminstration 1441 L Street, N.W. Washington, D.C. 20416 (202) 653-6567
U.S. Civil Service Commission	Ms. Shelya White Personnel & Labor Relations Division U.S. Civil Service Commission 1900 E Street, N.W. Washington, D.C. 20415 (202) 632-6270
Veterans Administration	Mr. Lester Edgmon Recruitment & Placement Service (054E) VA Central Office Washington, D.C. 20420 (202) 389-2569/3257

WORKSITES OF PARTICIPATING AGENCIES
PROVIDING COOPERATIVE EDUCATION EXPERIENCES
IN THE CHICAGO REGION — 1976

Illinois

Department of Agriculture	Harrisonburg Peoria
Department of the Air Force	Scott Air Force Base — Bellville
Department of the Army	Rock Island Arsenal — Rock Island
Department of HEW	Social Security Administration: Chicago — East St. Louis Harvey — North Riverside Alton — Joliet
	Social & Rehabilitation Service — Chicago
	Regional Office — Chicago
	Office of Education — Chicago
Department of the Navy	Naval Training Center — Great Lakes Office of Naval Research — Chicago Navy Regional Finance Center — Great Lakes
Department of the Treasury	Internal Revenue Service: Chicago District Office Chicago Regional Office Springfield District Office
	Office of the Comptroller of the Currency Regional Office — Chicago
Civil Service Commission	Regional Office — Chicago
Defense Logistics Agency	DCASR — Chicago
Federal Deposit Insurance Corp.	Regional Office — Chicago
General Accounting Office	Regional Office — Chicago
General Services Administration	Region 5 — Federal Supply Service
Veteran Administration	VA Hospital — Chicago VA Regional Office — Chicago VA Hospital — Hines

Indiana

Department of HEW	Social Security Administration Richmond — Terre Haute
Department of the Navy	Naval Avionics Facility — Indianapolis
	Naval Ammunition Production Engineering Center — Crane
	Naval Weapons Support Center — Crane
Department of the Treasury	Internal Revenue Service Indianapolis District Office
Department of Agriculture	Bedford

	Michigan
Department of Agriculture	Ironwood East Lansing
Department of the Army	U.S. Army Tank Automotive Command — Warren
Department of HEW	Social Security Administration Dearborn Detroit, East Detroit, Highland Park
Department of the Treasury	Detroit Data Center Internal Revenue Service Detroit District Office
Defense Logistics Agency	Defense Property Disposal Service
	Minnesota
Department of Agriculture	Duluth St. Paul Cass Lake Minneapolis
Department of the Army	U.S. Army Engineer District — St. Paul
Department of HEW	Social Security Administration Minneapolis Bemidji
Department of HUD	St. Paul Area Office
Department of the Treasury	Internal Revenue Service St. Paul District Office Office of the Comptroller of the Currency Regional Office — Minneapolis
Federal Deposit Insurance Corp.	Regional Office — Minneapolis
	Ohio
Department of Agriculture	Georgetown Columbus
Department of the Air Force	Newark Air Force Station — Newark Wright-Patterson Air Force Base — Dayton
Department of HEW	National Institute of Occupational Safety and Health — Cincinnati Social Security Administration Cleveland, Downtown Cleveland, Northwest Xenia
Department of the Army	U.S. Army Engineer District — Cleveland
Department of the Navy	Navy Finance Center — Cleveland
Department of Transportation	U.S. Coast Guard 9th District — Cleveland
Department of the Treasury	Internal Revenue Service: Cincinnati District Office Cincinnati Regional Office Cleveland District Office Office of the Comptroller of the Currency Regional Office — Cleveland
Defense Logistics Agency	Defense Electronics Supply Center Defense Construction Supply Center DCASR — Cleveland Defense Personnel Support Center

Federal Deposit Insurance Corp.	Regional Office — Columbus
General Accounting Office	Regional Office — Cincinnati
NASA	Lewis Research Center — Cleveland
National Labor Relations Board	Region 8 — Cleveland Region 9 — Cincinnati
Veterans Administration	VA Hospital — Chillicothe VA Hospital — Cincinnati VA Hospital — Cleveland VA Regional Office — Cleveland VA Center — Dayton
	Wisconsin
Department of Agriculture	La Crosse Madison Park Falls Milwaukee
Department of HEW	Social Security Administration La Crosse
Department of the Treasury	Internal Revenue Service Milwaukee District Office
Federal Deposit Insurance Corp.	Madison Regional Office

What of the foreign student in the co-op program? This is a potentially difficult area. The Immigration and Naturalization Service has published two documents (Pamphlet M-201 and Application Form I-538) on the subject of participation by foreign students in the cooperative education program, and, unfortunately, they are in conflict on several points. In the past it was generally true that foreign students in this country for the purpose of obtaining educations were not allowed to accept employment. Violations of this rule placed the students in danger of immediate deportation and the employers in possible trouble. Since then, however, the INS has apparently relaxed its tenets to the point where it is felt by some very responsible co-op personnel (such as those at the University of Detroit) that, if co-op programs are mandatory in certain curricula, foreign students may participate; if co-op is only optional, they may not. In any case, to keep your foreign students and your employers out of trouble it would probably be wise to follow the example of the University of Detroit and also to consult with your nearest INS representatives.

Understandably, the effects of the cooperative education program and its different schedules on student activities are far reaching. For some students the summer vacation may cease to exist because of the extra time required by co-op. Where the cooperative program is optional and relatively few students are involved, care must be taken to see that they aren't actually penalized.

It may become difficult to assign student housing spaces because some students will be moving so frequently on and off campus. Also, since some students do continue living on campus during co-op work periods, they may have a tendency to disturb others who are studying. Some colleges even make arrangement to house co-oping students in different areas.

Of course, all student activities from clubs and organizations to athletics stand to be affected by co-op calendars, too. Athletes must be assigned with careful consideration of location and duration of the seasons of their sports. And some student organizations are actually run in duplicate to accommodate students who are alternately on and off campus.

Then there is the military service reserve training program. Not only must course sequences be carefully planned to allow cooperative students the opportunity to participate, but the scheduling of summer training must be handled on a very special basis. Since cooperative students do not have the usual summer vacations during their upper class year, summer training must be scheduled in place of a regular industry period or during the summer following graduation. This means that commissions for cooperative students may not be awarded at commencement in June, but held over pending successful completion of summer training requirement.

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COOPERATIVE EDUCATION in the UNITED STATES and CANADA: 1977 SURVEY

James W. Wilson
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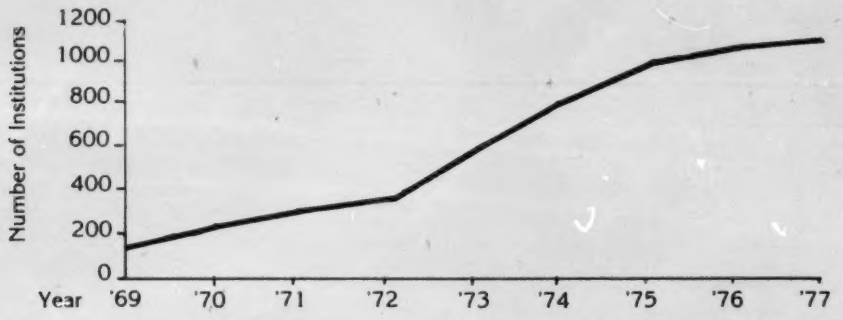
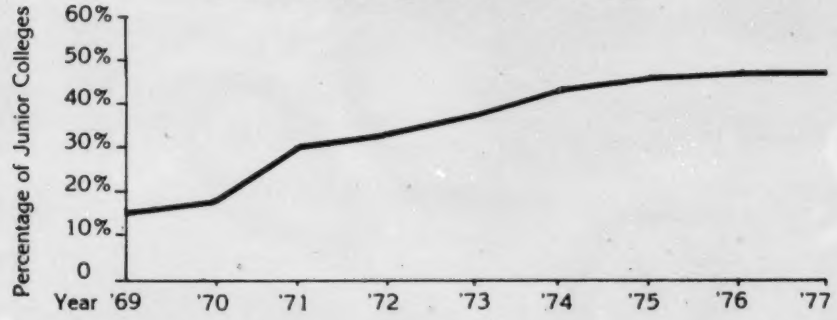
The expansion of cooperative education since the first annual survey, which was conducted by the Cooperative Education Research Center in 1969, has been remarkable — 730 percent. This growth is graphically represented in Figure 1. The curve shows not only the rapid expansion of cooperative education programs, but also

Figure 1
Population of Co-op Program by Each Year, 1969-1977



shows that the rate of growth has slowed substantially over the past two years. The net increase in the number of programs in 1976 was six percent and in 1977 was 2.6 percent. Of further significance is the relative expansion of programs in junior and community colleges, as compared to senior institutions. Figure 2 presents the percentage of the total population of cooperative programs which junior colleges represent for each year, 1969 through 1977. It shows that junior colleges have increased their participation in cooperative education from 17.6 percent of the population in 1969 to 46.6 percent in 1977. It also shows that this proportional expansion has leveled off over the past three years.

Figure 2
Percentage of Total Co-op Population Constituted by Programs in Junior Colleges



Because junior and community colleges have become such a significant part of the total effort in cooperative education, it was decided to examine similarities and differences between them and senior college cooperative education programs. The data for these analyses are of two sorts: basic file data which are program data collected annually, which do not change at all or only slightly over a period of several years and which have been added to our computer file with updatings over the past several years; and supplemented data which were collected in 1977 for the first time in about six years. These data represent a 62 percent sample of the estimated population of 1054 programs.

As the analyses to be reported upon in the remainder of this article will show, there are numerous differences between senior college and junior college cooperative education programs. There are also a number of important similarities. The first item of comparison (and difference) is institutional control. The data of Table 1 show that nearly three quarters of all co-op programs are found in public institutions. Proportionally many more senior co-op programs are in private institutions, whereas many more junior college programs are in public institutions.[1] This is understandable since most two year institutions are community colleges.

TABLE 1
Institutional Control of Junior and Senior Co-op Programs

Institutional Control	Senior		Junior		Total	
	f	%	f	%	f	%
Public	304	54.0	445	90.6	749	71.1
Private	259	46.0	46	9.4	305	29.9
X^2 = 169.398; d.f. = 1; P .0001						

[1]The significance of this and other differences to be reported was tested by the Chi-Square statistic for two independent samples.

A. PROGRAM STATUS AND ORGANIZATIONAL CHARACTERISTICS

There are five items to be considered in this section: the current operational status of the program; the operating mode; to whom co-op is made available; the conditions of co-op availability, and the administrative organization of the program within the institution.

Table 2 presents the current operational status of programs. The data show that 62 percent of all programs judge themselves to be fully operational with an additional 27 percent in the initial stages of implementation. The X^2 value for the table is significant, showing that the overall responses of senior and junior colleges are reliably different. The primary reason for this significant difference lies in the greater proportion of senior colleges programs judged to be fledgling.

TABLE 2
Operational Status of Junior and Senior Co-op Programs

Operational Status	Senior		Junior		Total	
	f	%	f	%	f	%
Fully operational	332	59.0	322	65.6	654	62.0
Fledgling	176	31.3	110	22.4	286	27.1
Planning, conducting feasibility study	42	7.4	45	9.2	87	8.2
No Response	13	2.3	14	2.9	27	2.6
X^2 = 10.655; d.f. = 3; P .02						

The single programmatic characteristic which best differentiates junior and senior college co-op programs is the operational mode. Junior colleges characteristically use the parallel plan, exclusively or in combination with other modes, and senior colleges characteristically use the alternating mode. The data of Table 3 shows this clearly. Ad-

TABLE 3
Operating Modes of Junior and Senior Co-op Programs

Operating Mode	Senior		Junior		Total	
	f	%	f	%	f	%
Alternating	237	42.1	54	11.0	291	27.6
Field	32	5.7	13	2.6	45	4.3
Parallel	28	5.0	96	19.6	124	11.8
Extended Day	3	0.5	13	2.6	16	1.5
Combination with Alternating (including Parallel)	147	26.1	144	29.3	291	27.6
Combination with Parallel (excluding Alternating)	40	7.1	105	21.3	145	12.8
Other	38	6.7	26	5.3	64	6.1
No Response	38	6.7	40	8.1	78	7.4

$X^2 = 194.102$; d.f. = 7; P .0001

ditionally, although the frequencies are relatively small, the greater number of field programs found in senior colleges and the greater number of extended day programs found in junior colleges contribute to the highly significant Chi Square value.

More senior colleges make cooperative education available to all students on campus, while more junior colleges make it available in a more limited number of curricula. These findings are presented in Table 4. These data also show that the large majority of both junior and senior college programs provide cooperative education

TABLE 4
Numbers of Curricula Participating in Junior and Senior Co-op Programs

Curricula Participating	Senior		Junior		Total	
	f	%	f	%	f	%
All curricula	241	42.8	156	31.8	297	37.7
Most curricula	125	22.2	122	24.8	247	23.4
Few curricula	108	19.2	140	28.5	248	23.5
One curriculum	48	8.5	34	6.9	82	7.8
No response	41	7.3	39	7.9	80	7.6

$X^2 = 19.979$; d.f. = 4; P .0005

work experiences to students in more than a single curriculum area. The date of Table 5 show that the majority of programs are also available to students on either a fully optional or selective basis (students must achieve a minimum academic average to qualify for participation). These data also show significant differences between junior and senior programs. The differences occur in three categories: more junior colleges run mandatory programs or programs with some elements operating on a mandatory basis and some on an optional basis; and more senior colleges operate selective programs. When these data are analyzed for trends over time, they show a significant trend from mandatory to optional programs.[2]

[2]A.E. Maxwell. **Analyzing Qualitative Data.** Methuen & Co. LTD, London, 1961.

TABLE 5
Manner of Availability of Co-op Students In Junior and Senior Programs

Availability of Co-op	Senior		Junior		Total	
	f	%	f	%	f	%
Mandatory	28	5.0	65	13.2	93	8.8
Optional	185	32.9	171	34.8	356	33.8
Selective	234	41.6	80	16.3	314	29.8
Some Mandatory, Some Optional	64	11.4	133	27.1	197	18.7
Other	9	1.6	6	1.2	15	1.4
No Response	43	7.6	36	7.3	79	7.5

$X^2 = 111.791$; d.f. = 5; P .0001

The final item to be examined in this section of the report is the position of cooperative education within the administrative organization of the institution. The data are summarized in Table 6. They show two principal models: a centralized program, reporting to the academic dean or vice president; and a program which is a function within an academic department, division, or college. The table, as a whole, shows a reliable difference between junior and senior colleges. Eighty-three percent of the X^2 value, however, is due to a single difference: significantly more senior colleges report that cooperative education is a function of the senior and alumni placement office.

TABLE 6
Administrative Position of Junior and Senior Co-op Programs

To Whom Co-op Reports	Senior		Junior		Total	
	f	%	f	%	f	%
President	19	3.4	20	4.1	39	3.7
Academic Dean or Vice President	215	38.2	189	38.5	404	38.3
Dean or Vice President Student Personnel	37	6.6	23	4.7	60	5.7
Placement Officer	33	5.9	2	0.4	35	3.3
Academic Department	151	26.8	145	29.5	296	28.1
Other	63	11.2	65	13.2	128	12.1
No Response	45	8.0	47	9.6	92	8.7

X^2 = 28.308; d.f. = 7; P .001

B. OPERATING CHARACTERISTICS

This section of the report will focus on information relating to co-op job characteristics and credit awarding policies and practices. Table 7 presents data regarding the relationship between students' cooperative work assignments and their academic major. The data show that over 80 percent of the programs report that all or most of their co-op jobs are related to the students' academic major. They further show that more junior colleges report that all co-op jobs are related and that more senior colleges report leaving the decision of job relatedness up to the student.

TABLE 7
Relatedness of Co-op Jobs to Student Academic Major For Junior and Senior Programs

Relatedness of Co-op Job	Senior		Junior		Total	
	f	%	f	%	f	%
All jobs related	180	32.0	187	38.1	367	34.8
Most jobs related	276	49.0	230	46.8	506	48.0
Difficult to find	24	4.3	29	5.9	53	5.0
Student decision	32	5.7	6	1.2	38	3.6
Non-related	1	0.2	—	—	1	0.1
Some yes, some no	7	1.2	1	0.2	8	0.8
No response	43	7.6	38	7.7	81	7.7

X^2 = 23.577; d.f. = 6; P .01

As with job relevancy, about 80 percent of the programs report that all or most of their co-op jobs are paid jobs. Differences between junior and senior colleges are statistically significant at the .05 level but in practical terms they are small. These findings are summarized in Table 8.

TABLE 8
Co-op Job Compensation For Junior and Senior Programs

Co-op Job Compensation	Senior		Junior		Total	
	f	%	f	%	f	%
All paid	380	67.5	306	62.3	686	65.1
Most paid	67	11.9	97	19.8	164	15.6
Half paid, half voluntary	45	8.0	28	5.7	73	6.9
Most voluntary	17	3.0	12	2.4	29	2.8
All voluntary	9	1.6	9	1.8	18	1.7
Other	1	.2	1	.2	2	.2
No Response	44	7.8	38	7.8	82	7.8

X^2 = 13.877; d.f. = 6; P .05

A significant trend over the past seven years has been the increasing number of programs adopting policies of awarding credit based upon cooperative work experience. The data of Table 9 show that 70 percent of all programs either award non-additive credit or award non-additive credit in some curricula and additive in other curricula.[3] Table 9 also shows ten percent more junior and community colleges award non-additive credit based upon co-op work experience than do senior colleges. The

TABLE 9
Credit Policies of Junior and Senior Co-op Programs

Credit Policies	Senior		Junior		Total	
	f	%	f	%	f	%
Additive	35	6.2	56	11.4	91	8.6
Non-Additive	326	57.9	335	68.2	661	62.7
Credit for projects	52	9.2	4	0.8	56	5.3
Both Additive and Non-Additive	34	6.0	40	8.1	74	7.0
None	81	14.4	22	4.5	103	9.8
Other	2	.2	—	—	1	0.1
No Response	34	6.0	34	6.9	68	6.5
$X^2 = 76.834$; d.f. = 6; P .001						

[3]Non-Additive credit means that the credits awarded take the place of academic credits normally earned by means of on-campus courses. Additive credit means that the credits awarded are added to the total credits normally required for graduation.

difference is statistically reliable. By contrast, significantly more senior programs award credit for study projects based upon some aspect of their cooperative work experience. In addition, more senior colleges do not award any credit at all.

The amount of credit per work experience and total, for senior and junior colleges is summarized in Table 10 and 11. The average per experience credit is 4.2 and 3.75 respectively for senior and junior colleges; the average total number of credits awarded is 11.6 and 10.3. In practical terms the differences are small. They are, however, statistically reliable. It is clear from these findings that credits earned from co-op constitute, on the average, 17 percent of an associate degree and 9 percent of a baccalaureate degree. It should be further noted that for 39 percent of the senior colleges and 38 percent of the junior colleges the amount of credit that may be earned for any single work term varies among participating departments.

TABLE 10
Per Co-op Experience Credit Awarded
By Junior and Senior Programs

Credits	Senior		Junior		Total	
	f	%	f	%	f	%
1-3	101	22.5	124	28.5	225	25.5
4-6	89	19.9	86	19.8	175	19.8
7 +	42	9.4	26	6.0	68	7.7
Varies by department	176	39.3	164	37.7	340	38.5
Varies among students	4	0.9	6	1.4	10	1.1
Varies, both departments and students	11	2.5	7	1.6	18	2.0
Other	7	1.6	15	3.4	22	2.5
No Response	18	4.0	7	1.6	25	2.8
$X^2 = 15.441$; d.f. = 7; p .05						

TABLE 11
Maximum Credit Awarded By Junior and Senior Programs

Maximum Degree Credit	Senior		Junior		Total	
	f	%	f	%	f	%
1-3	21	4.7	21	4.8	42	4.8
4-6	63	14.1	66	15.2	129	14.6
7-9	56	12.5	68	15.6	124	14.0
10-12	64	14.3	89	20.5	153	17.3
13-15	40	8.9	28	6.4	68	7.7
16-18	49	10.9	69	15.9	118	13.4
19-21	10	2.2	1	0.2	11	1.2
22 +	36	8.0	8	1.8	44	5.0
Varies	84	18.8	73	16.8	157	17.8
No Response	25	5.6	12	2.8	27	3.1
$X^2 = 41.161$; d.f. = 9; P .001						

A question regarding the relationship of co-op jobs and academic major was asked of all programs awarding credit. Responses to this question are summarized in Table 12. More senior colleges than junior colleges insist upon job relevance if credit is to be awarded. It is interesting to observe that a comparison of credit awarding programs and programs which award no credit showed no difference with respect to insistence upon major-related co-op jobs. Apparently, the objective of providing students with professionally related work experience is basic to cooperative education, irrespective of whether credit is to be awarded or not.

TABLE 12
Relationship of Co-op Job to Academic Major Among Credit Awarding Junior and Senior Programs

Relatedness of Co-op Job	Senior		Junior		Total	
	f	%	f	%	f	%
Job must be related	193	43.1	233	53.6	426	48.2
Most jobs related	155	34.6	147	33.8	302	34.2
Need not relate	81	18.1	48	11.0	129	14.6
No Response	19	4.2	7	1.6	26	2.9
$X^2 = 17.761$; d.f. = 3; P .01						

Once a decision has been made to award credit and the amount of credit has been determined it next follows that a decision as to who shall be responsible for awarding the credit must be made. A variety of decisions have been made. They are summarized below in Table 13 and show the most frequent approaches are to place responsibility upon: 1) the academic departments involved — 26.6 percent; 2) the cooperative education coordinators — 23.4 percent; and 3) to give joint responsibility to coordinators and faculty — 19.9 percent. There are striking differences between junior and senior colleges with regard to the first two of these policies. Many more junior colleges place responsibility for awarding credit with coordinators. In contrast, many more senior colleges have the teaching faculty assume responsibility for awarding credit.

TABLE 13
Responsibility For Awarding Credit Among Junior and Senior Co-op Programs

Responsible for Awarding Credit	Senior		Junior		Total	
	f	%	f	%	f	%
Co-op Coordinator	38	8.5	169	38.9	207	23.4
Co-op Director	67	15.0	65	14.9	132	14.9
Co-op Advisory Committee	10	2.2	5	1.1	15	1.7
Coordinator and Faculty	92	20.5	84	19.3	176	19.9
Academic Department	178	39.7	57	13.1	235	26.6
Coordinator and Director	6	1.3	14	3.2	20	2.3
Coordinator and Academic Dean	19	4.3	19	4.4	38	4.3
Other	23	5.1	19	4.4	42	4.8
No Response	15	3.3	3	0.7	18	2.0

$X^2 = 158.690$; d.f. = 8; P .0001

Finally, programs awarding credit were asked if tuition is charged for the credit. Responses are found in Table 14. They show that most credit awarding programs do charge for the credits earned through co-op and do so at the same rate as credits earned through other means. Junior and senior colleges are essentially alike with regard to this decision but differ among other alternative approaches. More junior colleges charge no tuition and more senior colleges charge at a rate different from that charged for other credits (presumably a lesser amount).

TABLE 14
Tuition Policies For Co-op Credit Earned Among Junior and Senior Programs

Tuition For Credits Awarded	Senior		Junior		Total	
	f	%	f	%	f	%
Regular rate	339	75.7	329	75.6	668	75.6
Different from regular rate	39	8.7	11	2.5	50	5.7
Yearly tuition	36	8.0	26	6.0	62	7.0
No	19	4.2	62	14.2	81	9.2
No Response	15	3.3	7	1.6	22	2.5

$X^2 = 42.997$; d.f. = 4; P .0001

All programs, whether awarding credit for co-op or not, were asked if they use some form of learning contract when placing their students on an assignment. These responses, summarized in Table 15, show that a total of 36 percent of all programs currently use learning contracts and that an additional seven percent are considering their use. Significantly more junior colleges than senior colleges report some application of contract learning to their cooperative education programs. Focusing only upon those who responded to the question about learning contracts and awarding credit, it is interesting to note that a significantly larger proportion of programs awarding credit of any kind use learning contracts than programs not awarding credit. These findings are presented in Table 16.

TABLE 15
Use of Learning Contracts By Junior and Senior Co-op Programs

Use Learning Contract	Senior		Junior		Total	
	f	%	f	%	f	%
Yes	147	26.1	228	46.4	375	35.6
No	150	26.6	35	7.1	185	17.6
Planning	47	8.3	25	5.1	72	6.8
No Response	219	38.9	203	41.3	422	40.9

$X^2 = 91.821$; d.f. = 3; P .0001

TABLE 16
Use of Learning Contracts By Credit Policies

Use of Learning Contracts	Additive Credit		Non-Additive Credit		Additive & Non-Additive Credit		Credit For Projects		No Credit	
Learning contract	30	61.2%	279	68.0%	42	70.0%	13	38.2%	9	12.0%
No learning contract	16	32.7	90	22.0	7	11.7	16	47.1	56	74.7
Considering contract	3	6.1	41	10.0	11	18.3	5	14.7	10	13.3

$X^2 = 112.412$; d.f. = 8; P .0001

As a follow-up to the questions regarding credit and learning contracts, program directors were asked to report how student learning was assessed. Their responses are summarized in Table 17. Terms papers and student reports are the single most frequently used method for documenting student learning. They are used three times as often as the next most frequent approach, reliance upon employer judgments. Senior and junior colleges differ significantly with regard to their use of these two most frequent assessment approaches. Senior colleges make greater use of student papers and junior colleges use employer ratings more frequently.

TABLE 17
Approaches To Evaluation of Student Learning Among Junior and Senior Programs

Evaluation Strategy	Senior		Junior		Total	
	f	%	f	%	f	%
Term paper and reports	244	49.2	163	37.4	407	43.7
Logs, journals	44	8.9	51	11.7	95	10.2
Student self evaluation	67	13.5	63	14.4	130	13.9
Employer, site supervisor	57	11.5	78	17.9	135	14.5
Co-op coordinator	26	5.2	24	5.5	50	5.4
Instructor, faculty advisor	25	5.0	24	5.5	49	5.2
Seminar participation	27	5.4	25	5.7	57	6.1
Other	6	1.2	8	1.8	14	1.5

Junior and senior institutions also differ with respect to the number of reported visits to students while on work assignments and the number of reported visits to employers. In both instances, junior colleges report a greater number of visits. These data are presented in Tables 18 and 19.

TABLE 18
Average Annual Coordinator Visits To Students While On Co-op Assignment Among Junior and Senior Programs

Average Number of Per Student Visits	Senior		Junior		Total	
	f	%	f	%	f	%
Less than one per student	191	33.9	63	12.8	254	24.1
1-2 per student	105	18.7	116	23.6	221	21.0
More than 2 per student	32	5.7	98	20.0	130	12.3
No Response	235	41.7	214	43.6	449	42.6

$X^2 = 94.935$; d.f. = 2; P .0001

TABLE 19
Average Annual Coordinator Visits To Employers Among Junior and Senior Programs

Number Employer Visits	Senior		Junior		Total	
	f	%	f	%	f	%
0	11	2.0	5	1.0	16	1.5
1- 25	177	31.4	115	23.4	292	27.7
26- 50	66	11.7	36	7.3	102	9.7
51- 75	21	3.7	22	4.8	43	4.1
76-100	21	3.7	37	7.5	58	5.5
101-125	12	2.1	16	3.3	28	2.7
More than 125	14	2.5	43	8.8	57	5.4
No Response	241	42.8	217	44.2	458	43.4
$X^2 = 40.529$; d.f. = 7; P .001						

C. PROGRAM STAFF

This section of the report presents data regarding the educational levels of program coordinators and data on staff salaries.

Table 20 gives the highest level of education achieved by professional program staff of junior and senior college programs. The findings show somewhat similar dis-

TABLE 20
Highest Level of Education Achieved By Professional Staff of Junior and Senior Programs

Education Level	Senior		Junior		Total	
	f	%	f	%	f	%
Less than baccalaureate	10	0.9	84	4.2	94	3.1
Baccalaureate	200	18.8	463	23.2	663	21.7
Masters	520	48.9	1354	67.9	1874	61.3
Doctorate	334	31.4	94	4.7	428	14.0
$X^2 = 424.275$; d.f. = 3; P = 0						

tributions of educational level for junior and senior college program staff in that for both the masters degree accounts for the largest proportion and less than the baccalaureate accounts for the smallest proportion. However, the staffs are proportionally alike only with regard to their numbers who have the baccalaureate degree. Significantly more junior college program staff have less than the baccalaureate and significantly more have the masters degree. On the other hand, significantly more senior college program staff have the doctorate. The data also suggest a substantially greater number of junior college staff than senior college staff participating in cooperative education. Direct data on this point, however are not available.

Tables 21 and 22 below present data on junior and senior college program salaries for coordinators and directors, respectively. Table 21 gives the distribution of coordinator salaries. The data show the junior and senior distributions differ at the 95

TABLE 21
Distribution of Coordinator Salaries Among Junior and Senior Programs

Salary Distribution	Senior		Junior		Total	
	f	%	f	%	f	%
Up to $12,000	19	3.4	9	1.8	28	2.2
$12,001-$16,000	58	10.3	52	10.6	110	10.5
$16,001-$20,000	58	10.3	47	9.6	105	10.0
$20,001-$24,000	25	4.4	36	7.3	61	5.8
$24,001 and above	4	0.7	10	2.0	14	1.3
No Response	399	70.9	337	68.6	736	70.2
$X^2 = 9.468$; d.f. = 5; P .05						

percent level of confidence, with a somewhat greater proportion of junior college program coordinators earning higher salaries. It seems likely that the fact that two-year college programs are almost exclusively in public institutions whereas only half of the senior college programs are in public institutions may account for this difference. On the other hand, the data of Table 22 show no differences in the salary levels of junior and senior program directors.

TABLE 22
Distribution of Director Salaries Among Junior and Senior College Programs

Salary Distribution	Senior		Junior		Total	
	f	%	f	%	f	%
Up to $14,000	34	6.0	38	7.7	72	6.8
$14,001-$18,000	72	12.8	46	9.4	118	11.2
$18,001-$22,000	40	7.1	37	7.5	77	7.3
$22,001-$26,000	17	3.0	11	2.2	28	2.7
$26,001 and above	18	3.2	14	2.9	32	3.0
No response	382	67.9	345	70.3	727	69.0
$X^2 = 4.841$; d.f. = 5; P .40						

D. COOPERATIVE EDUCATION PROGRAM ENROLLMENTS

Co-op student enrollment data are summarized in Table 23. These data indicate, first, that the enrollment distributions for junior and senior college programs differ significantly, with more senior programs having no more than 100 students and more junior programs with more than 800 student enrollments. Second, the data show, for both junior and senior programs that at least half the programs have no more than 100

TABLE 23
Student Enrollments In Junior and Senior Programs

Student Enrollments	Senior		Junior		Total	
	f	%	f	%	f	%
1000 and above	11	1.9	19	3.9	30	2.8
901-1000	3	0.5	9	1.8	12	1.1
801- 900	2	0.3	6	1.2	8	0.8
701- 800	4	0.7	2	0.4	6	0.6
601- 700	2	0.3	8	1.6	10	0.9
501- 600	10	1.8	9	1.8	19	1.8
401- 500	8	1.4	9	1.8	17	1.6
301- 400	11	1.9	23	4.7	34	3.2
201- 300	24	4.1	33	6.7	57	5.4
101- 200	65	11.5	90	18.3	155	14.7
1- 100	330	58.6	243	49.5	573	54.5
No Response	93	17.0	70	14.3	163	15.5
$X^2 = 36.082$; d.f. = 11; P .01						

participating students. The typical program size (median) for senior colleges is 56 student enrollments, for junior colleges 76 and for the total, 73.[4] Calculation of average (mean) program size poses a problem because the relatively few programs of more than 1000 student enrollments (2.8 percent) greatly distort the arithmetic mean. In an effort to compensate, mean enrollments were calculated with these "outlanders" removed. The average senior college program was found to be 110 students, the average junior college program 170 students and the average of all programs 138 students. Using these average figures for all programs reporting enrollments of no more than 1000 and also for programs not reporting enrollments and adding the

known enrollments for programs greater than 1000, the best estimates of co-op population enrollments are:

— Senior college programs	94,269 students
— Junior college programs	110,488 students
— Total population of programs	204,757 students

[4]For purposes of calculating median and mean student enrollments, class intervals of 25 students were used, rather than the 100 student intervals given in Table 23.

E. SUMMARY

The 1977 cooperative education survey data were analyzed so as to show both major characteristics of programs in the U.S. and Canada and the similarities and differences between programs in junior and senior colleges. The principal findings are summarized below:

1. There are 1054 co-op programs in the U.S. and Canada (15 in Canada). Of these, 563 (53 percent) are in senior colleges and 491 (47 percent) are in junior colleges.
2. Just over half the senior programs are in public institutions, whereas 90 percent of junior programs are in public institutions.
3. The principal mode of operation among senior programs is the alternating plan. Among junior programs, it is the parallel plan.
4. Among senior college programs, the most frequently used plan of student access to the program is the optional with specified academic standards for admission. Freely optional programs are the second most frequent. Among junior college programs, the optional plan is the most frequent but there are also a substantial number of mandatory programs.
5. Most programs, both junior and senior, report all or most co-op work assignments are related to the students' academic majors.
6. The great majority of co-op work assignments are paid, for both junior and senior programs.
7. About 70 percent of all programs award degree credit based upon co-op work. These credits substitute for credits typically earned through on-campus courses. More junior programs award credit than senior programs.
8. The average per work experience number of credits awarded for co-op is 4.2 for senior programs and 3.75 for junior programs. The average number of total credits awarded is 11.6 and 10.3 respectively for senior and junior programs.
9. Approximately half of the junior college programs report using some form of learning contract with their co-op students. Among senior colleges, about one-quarter report using them.
10. The most frequently used methods of student evaluation are, for both junior and senior programs, term papers and reports (44 percent) and employer assessment (15 percent).
11. Coordinators in junior college programs report more frequent visits to students at work and to employers than do coordinators in senior programs.
12. A substantially greater proportion of senior program coordinators have the doctorate than junior program coordinators.
13. The overall distribution of coordinator salaries is somewhat higher among junior programs in comparison with senior programs. For directors, however, the distributions of salary are the same.
14. It is estimated that there are about 205,000 co-op students in the U.S. and Canada. Over half the programs have fewer than 100 student enrollments.

BIBLIOGRAPHY

Any college planning to implement cooperative education would be well advised to join any or all of some outstanding organizations representative of co-op groups. Among those are:

Midwest Cooperative Education Association
% Chuck Jonas, Treasurer, MCEA
Director of Community Services
Cincinnati Technical College
3520 Central Parkway
Cincinnati, Ohio 45223

Cooperative Education Association
% Mike Pettebone
Indiana State University
Terre Haute, IN 47809

Cooperative Education Division
American Society for Engineering Education
Chairman (1978-79) W. Bostwick
Purdue University
1219 West Michigan Avenue
Indianapolis, Indiana 46202

National Commission for Cooperative Education
360 Huntington Avenue
Boston, Massachusetts 02115

Benefits from belonging to such organizations are typified by the following release from the National Commission for Cooperative Education:

What Your Membership in the Commission Means

As a dues-paying member of the Commission, you will, in conjunction with other college members, help finance a wide range of activities which directly benefit your own program, including:

Indoctrinating private and public sector employers in the cost benefits and social benefits of hiring cooperative education students by giving assistance in the organization and program content of conferences for employers and cooperative education personnel on the local level.

Developing training programs and materials for college cooperative education directors and coordinators, such as the training manual on how to use effective "sales" techniques in placing co-op students in private sector jobs.

Conducting research and disseminating information on a regular basis to college personnel, business leaders, and the general public by means of monthly and quarterly newsletters. The National Commission also distributes a directory of colleges and universities that offer cooperative education programs to 30,000 inquiries each year from high school students, parents, employers, educators, and guidance counselors.

Counseling college administrators on the implementation of cooperative education programs by conducting regional seminars for college presidents and chancellors to present to them effective methods for maintaining and expanding cooperative education programs at their institutions.

Assisting in the organization of the state and regional associations of cooperative education colleges, employers, and community groups to stimulate collaboration and interaction.

Informing high school guidance counselors of the availability of colleges and universities that offer cooperative education as a means of encouraging enrollments in such institutions.

A SELECTED BIBLIOGRAPHY FOR YOUR CO-OP LIBRARY SHELF

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June P. Bobbitt, Assistant Director
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Bender, Louis W.; Lucas, Aaron, D.; and Holsenbeck, Daniel C. **Cooperative Education: Conception to Credibility.** 1975. Division of Education Management Systems, College of Education, Florida State University, Tallahassee, Fla. $2.50.

General summary of cooperative education, some history, some operation, with references to many other sources.

Bolles, Richard Nelson. **What Color is Your Parachute? A Practical Manual for Job-Hunters and Career Changers.** Revised Edition. 1976. Ten Speed Press, Box 4310, Berkeley, CA 94704. Paperback is $4.95 per copy plus 25c per copy postage and handling (includes sales tax). Hardback is $7.95 per copy plus 50c per copy postage and handling (includes sales tax).

Good idea book for placement personnel or to those seeking their own careers or positions.

The Carnegie Commission on Higher Education. **"Less Time, More Options — Education Beyond the High School."** New York: Mc-Graw-Hill Book Co., 1971. Copies available from McGraw-Hill Book Company, Highstown, NJ 08520 for $1.95 each.

This is one of the publications which got many in higher education to give more thought to Cooperative Education in the early '70s.

Center for the Advancement of Cooperative Education. **Institutional Assessment Instrument.** 1976. Request copies from Director, Room 311, Smith Hall, Wilberforce, OH 45384.

This instrument is used by the above Center for assessment and/or evaluation of programs taking part in their activities. Very good instrument.

Chapman, Edwood N. **Work Experience Survival Kit.** Pacific Palisades, Ca.: Goodyear Publishing Company, Inc., 1973. Paperback. $5.95.

Good textbook for use by students while on a Co-op training assignment.

Cooperative Education Association. **A Directory of Cooperative Education: Its Philosophy and Operation in Participating Colleges in the United States and Canada.** Philadelphia, Pa. Drexel Univ., 1975 $7.00.

This lists most of the active Co-op Programs, who is heading the program, plus the coordinators of various areas, gives date the program started, phone numbers and addresses. This comes as part of a Cooperative Education Association membership, $7 to others.

Cooperative Education Association. **Directory of Members.** Philadelphia, Pa.: Drexel University, 1977.

Good source to know names of employer representatives, plus reps of Co-op institutions. Names, addresses, and phone numbers. Free with CEA membership.

Cooperative Education Association. **Journal of Cooperative Education.** Philadelphia, Pa.: Drexel Univ. $3.00 per year.

Subscription comes with CEA membership. Has been in existence since 1964 and covers most of the current thought on Co-op Education.

Cooperative Education Awards, 1970-1975. The Higher Education Act of 1965 (P.L. 89-329) as Amended, Title IV-D. Copies available from Director of Training and Facilities, Bureau of Postsecondary Education, U.S. Office of Education, Washington, DC 20202.

Covers all Federal Funding, Title IV-D, made to Co-op beginning in 1970. Very informative as to who is getting the money, broken down by states.

Cooperative Education Information Clearinghouse. Cooperative Education Research Center, Northeastern University, Boston, MA 02115, October, 1975. $2.00.

List compiled by James Wilson of nearly everything that has ever been written regarding Cooperative Education. Good source book in building a Co-op library. Lists cost of each item, papers and articles, many for less than $1.

Crystal, John C., and Bolles, Richard N. **Where Do I Go from Here with My Life?** 1974. The Seabury Press, 815 Second Avenue, New York, NY 10017. Paperback. $7.95.

Good on career planning. Use in conjunction with **What Color Is Your Parachute?**

"Documented Employer Benefits from Cooperative Education — The Report of a Study for Northeastern University." May, 1974. (Study conducted by Arthur D. Little, Inc.)

Federal Employment of Cooperative Education Students. Annual Report. Copies available from Manpower Sources Division, Bureau of Recruiting and Examining, U.S. Civil Service Commission, 1900 E Street, N.W., Washington, DC 20415.

This tells what Federal agencies are taking Co-op students, how many and from what institutions. Gives a good idea of where the action is in Federal agencies, broken down by disciplines.

Fretwell, Jack W., Jr. **Seminar Leaders' Guide to Selling Cooperative Education.** Boston: National Commission for Cooperative Education, 1975.

This guide was designed for use by Training Centers in presenting sales techniques to workshop participants. However, in the near future a manual will be published that will be designed to be used by coordinators and directors in cooperative education programs. In 1976-'77 funding some Training Centers will be injecting "Sales" segments in their workshops and participants should receive manuals referred to above. Keep in touch with Training Centers.

Grayson, Lawrence P. and Biedenback, Joseph M., eds. **Proceedings 1976 College Industry Education Conference,** January 14-16, 1976. American Society for Engineering Education, Suite 400, One DuPont Circle, Washington, DC. $12 ASEE members.

This has some good papers, and/or summaries of papers, on women and minorities, re Co-op.

A Guide to Operating an Off-campus College Work-Study Program. A joint publication by the National Association of Student Financial Aid Administrators and The Project for Service-Learning of the American Association of Community and Junior Colleges. May, 1975. One DuPont Circle, N.W., Suite 410, Washington, DC 20036.

This shows how CWSP funds may be used for Co-op.

Heerman, Barry. **Cooperative Education in Community Colleges.** San Francisco: Jossey-Bass Publishers, 615 Montgomery Street, San Francisco, CA 94111. 1973. $8.75

Good book for any Co-op director or coordinator. While written by a two-year college faculty member it is a good book for those with four-year institutions as well. Highly recommended for your Co-op library shelf. Makes a good companion book to Knowles **Handbook of Cooperative Education.**

Henderson, Algo, and Hall, Dorothy. **Antioch College: Its Design for Liberal Education.** New York: Harper and Brothers, 1946.

Out of print but may be borrowed from many older Co-op programs or perhaps from Antioch College Library. Covers the establishment of the Co-op philosophy at Antioch in the days of Arthur Morgan, famous not only as President of Antioch but for his leadership in the early days of the TVA. Morgan died in late 1975.

Heyel, Carl. **Dynamic Business-Conference Technique.** Personnel Journal, Santa Monica, CA., 1966. $9.50.

Good information on setting up successful conferences and workshops.

Hunt, Donald C., ed. **50 Views of Cooperative Education.** 4th edition. Copies available from Midwest Center for Cooperative Education, University of Detroit, 4001 W. McNichols Road, Detroit, MI 48221.

50 views gives the thoughts of many persons on Cooperative Education, some perhaps conflicting, but a very good source for ideas on establishment and operation of a Co-op Program. The initial papers or presentations were made or given during workshops and institutes at the University of Detroit's Midwest Center for Cooperative Education.

Instructions for Submitting a Cooperative Education Program Application for a Grant. Washington, D.C.: Office of Education, U.S. Department of Health, Education and Welfare.

New version out each year, but a necessary booklet for those writing a proposal for Title VIII, Co-op funds via Federal Funding.

Johns, Harry G. **"The Need for and How to Obtain Institutional Commitment to Cooperative Education."** Paper presented to the Cooperative Education Workshop, for Directors, Coordinators, Faculty, August 18-22, 1975, Dayton, Ohio. Copies available from Dr. Johns, Task Force Member, Central State University, Wilberforce, OH 45384.

Johns, Harry G. **"Securing and Maintaining Institutional Commitment to Cooperative Education."** Paper presented to the Cooperative Education Workshop, Presidents' Session, August 18, 1975, Dayton, Ohio. Copies available from Dr. Johns, Task Force Member, Central State University, Wilberforce, OH 45384.

Very little has been written on Institutional Commitment — this is a good paper.

Knowles, Asa S. and Associates. **Handbook of Cooperative Education.** San Francisco: Jossey-Bass, Inc., 1971. $12.50.

One of the major books written in early 1970s on Co-op. Some chapters especially good for those responsible for the administration of a Co-op Program. Makes a good companion book to Heerman's **Cooperative Education in Community Colleges.** Most of the chapters are by practitioners in field other than Knowles, who at the time the book was edited was President of Northeastern University.

Lucas, Aaron. **Process Model for the Development of a Cooperative Education Program.** Out of print, but copies are available from directors of Cooperative Education Programs established prior to 1975.

Good in covering step-by-step process of establishing a Co-op program.

Lupton, D. Keith, ed. **The Student in Society.** Totowa, N.J.: Littlefield, Adams & Co., 1969. Paperback. $4.95.

This book may be out of print by 1977-'78 school year, but since its publication has been used by many institutions as a textbook for their Cooperative Education students. Highly recommended as an idea book for producing credit while on off-campus assignments. Some 30-plus authors shared in the writing of the various chapters.

Miller, George H., McClung, Gene E., and Farkash, Joe. **Academic Improvement Project for the Department of Distributive and Cooperative Education — Manatee Junior College.** Tampa, Fla.: University of South Florida, 1969.

A good study on how a community desired to have a Co-op program in its community/junior college. Copies may still be available by loan from Manatee Junior College.

Park, Clyde W. **Ambassador to Industry: The Idea and Life of Herman Schneider.** Indianapolis: Bobbs-Merrill Co., 1943. $3.50.

Out of print but may be borrowed from some of the early Co-op programs, possibly from the University of Cincinnati Library. It is the story of Prof. Schneider's establishment of the first Co-op program in the U.S. at the University of Cincinnati in 1906.

"Report on Higher Education." (The Newman Report.) Washington, D.C.: U.S. Government Printing Office, 1971. Copies available from Superintendent of Documents, Washington, DC 20402. $.75.

Another of the publications of the early 1970s which made many think in terms of Cooperative Education and how it could serve the total field of education.

Ritterbush, Philip C., ed. **Let the Entire Community Become Our University.** Acropolis Books, Ltd., Colortone Building, 2400 17th St., N.W., Washington, DC 20009, 1972. Paperback. $3.95.

Final Report. Cooperative Education Planning Study. HEW-OS-74-262 (The Consad Report), Office of Planning, Budgeting and Evaluation/PSID. Dept. of HEW, Office of Education, Washington, DC 20202.

Seaverns, Charles F., Jr. **A Manual for Coordinators of Cooperative Education.** Boston, Mass.: Center for Cooperative Education, Northeastern University, May, 1974. $2.00.

Very good as a manual for those establishing a Cooperative Education Program. Has sample forms, guide as to what to do.

Shelton, G. Kathryn, ed. **Options for Learning: A Catalogue of Off-Campus Learning Opportunities in Kentucky.** Copies available from Office for Experiental Education, University of Kentucky, October, 1974.

Southeastern Center Handbook for Cooperative Education. Tampa, Fla.: University of South Florida, 1977. $1.00.

This handbook has been compiled for use at Workshops conducted by the Southeastern Center for Cooperative Education, but it is a good reference source even without attending a Workshop. Includes sections on "Organization and Administration of Co-op Programs," "Cooperative Education Forms," "Research," "Training of Co-operative Education Faculty," and "Evaluation."

Student Manpower Resources in Kentucky: College and University Programs for Work-Learning in Kentucky. October, 1974. Copies available from Work-Study Development Project, Office of the Dean of Labor, Berea College, Berea, KY.

Vance, Charles C. **Boss Psychology: Help Your Boss Make You a Success.** New York: McGraw-Hill Book Company, 1975. $8.95.

A good idea book for establishing a good Co-op staff — let your secretary read it.

Wilson, James W. **Impact of Cooperative Education upon Personal Development and Growth of Values:** Final Report to the Braitmeyer Foundation. Boston, Mass.: Northeastern University, 1974. $3.50.

Highly recommended for those establishing a Cooperative Education Program.

Wilson, James W.; Brown, Sylvia, J.; Bork, G. Ruth; and Black, Vikki H. **Implementation of Cooperative Education Programs.** Boston, Mass.: Northeastern University, 1975. $4.00.

Wilson, James W.; and Lyons, Edward H. **Work-Study College Programs.** New York: Harper and Brothers, 1961.

This was the first major study in the field of Cooperative Education. Good quotes in this from Ralph Tyler.

Workbooks for Cooperative Education Students. Write to Broward Community College, Fort Lauderdale, Florida, or Central Florida Community College, Ocala, Florida.

Wilson, James. W. **Cooperative Education and Degree Credit.** Published by the Cooperative Education Research Center, Northeastern University, Boston, Mass. 02115.

Journal of Cooperative Education. Association Headquarters, 8 W. 40th St. New York, N.Y. 10018. Publication office, University of Detroit, Detroit, Mich. 48221. Editor, Harry N. Heinemann, Fiorello H. LaGuardia Community College, Long Island, N.Y.

Booklet — **Cooperative Education Programs — A Handbook for Cooperative Education Students.** Cooperative Education and Placement, University of Detroit — 4001. W. McNichols Rd., Detroit, Mich. 48221.

Tyler, Ralph W. and Mills, Annie L. **Report on Cooperative Education.** Summary of the National Study. Thomas Alva Edison Foundation, 8 West 40th St., New York, 18 N.Y.

Conference Report on Cooperative Vocational Education. Report on National Conference on Cooperative Education. Washington, DC — April 3-5, 1973. Dept. of HEW, U.S. Office of Education, Board of Occupational and Adult Education. Division of Vocational and Technical Education. Washington, DC 20202

Documented Employer Benefits from Cooperative Education. A Study for Northeastern Univ. Boston, Mass. 02115. (By Arthur D. Little).

A SELECTED BIBLIOGRAPHY FOR YOUR CO-OP LIBRARY SHELF

Addendum

Brown, Sylvia, J. **Cooperative Education and Career Developoment: A Comparative Study of Alumni.** Boston, Mass.: Northeastern University, 1976.

College Placement Council, Inc. **Directory of College Recruiting Personnel.** P.O. Box 2263, Bethlehem, Pa., 18001, 1977. $8.00.

Helpful in identifying recruiters from major companies.

Cooperative Education: "The Extra Dimension." Auburn, Ala.: Auburn University Cooperative Education Training Center.

A compilation of selected readings on cooperative education. Helpful in explaining co-op to educators.

The Co-op Speaks . . . Excerpts from Co-op Student Work Reports. Auburn, Ala.: Auburn University Cooperative Education Training Center.

A compilation of work reports from co-op students which illustrates the kinds of tasks performed by students in selected curricula.

Employer Experience With Cooperative Education: Analysis of Costs and Benefits. Detroit, Mich.: The Detroit Institute of Technology, Cooperative Education Research Center.

Helpful facts in selling employers on Co-op.

Kane, Stephan N. **An Overview of Federal Government Policies Regarding Cooperative Education.** Boston, Mass.: Northeastern University, 1976.

Kinnison, Joyce F.; Probst, George E. **Education for the Self-Built Self: An Exploratory Investigation of Liberal Arts Cooperative Education Programs in Higher Education.** Montreat, N.C.: Montreat-Anderson College, 1976. $5.00.

Identifies different approaches for liberal arts cooperative education programs.

Pivar, William H. **Work Experience Handbook.** San Francisco, Ca.: Canfield Press, Harper & Row Publishers, Inc., 1976. $3.95.

A student handbook which may be used in conjunction with a cooperative work experience.

Raphael, Bernard J. **Cooperative Education in Higher Education: A Management System for Planning, Operating and Evaluating Cooperative Education Programs in Higher Education.** Bloomington, Minn.: Normandale Community College, Cooperative Education Training Center, 1976.

An overview of methods and techniques for development and implementation of a management system for Cooperative Education Programs.

Wales, LaRae H. **A Practical Guide to Newsletter Editing & Design.** Ames, Iowa: The Iowa State University Press, 1976.

A good guide for those who plan to publish a newsletter.

A SELECTED BIBLIOGRAPHY FOR YOUR CO-OP LIBRARY SHELF

Addendum No. 2

Holland, John L. **Making Vocational Choices: A Theory of Careers.** Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973.

Kumai, Etsuko; Wilson, James W. **Cooperative Education Information: Clearinghouse Supplement to Third Edition.** Boston, Mass.: Northeastern University, Cooperative Education Research Center, 1976.

Lathrop, Richard. **Who's Hiring Who.** Reston, Va.: Reston Publishing Co., Inc., 1976.

A Coordinator's Guide to Selling Cooperative Education. Boston, Mass.: National Commission for Cooperative Education, 1976.

Pratt, Christopher G. L. **Survey of Faculty Attitudes Toward Cooperative Education.** Peoria, Ill.: Bradley University, 1974.

Pratt, Christopher G. L. **A Team Theory.** Peoria, Ill.: Bradley University, 1973.

Women in Non-Traditional Occupations — A Bibliography. Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Education and Welfare, Office of Education, Bureau of Occupational and Adult Education, 1976.

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